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EFFECTIVENESS OF THE SMALL HIGH SCHOOL

THE EDUCATION OF TEACHERS OF LITERATURE

THE ADOLESCENT IN EUROPE

THIRTY-ONE RULES FOR CLASSROOM DISCIPLINE

SYMPOSIUM THIS MONTH

USING TEAM TEACHING TO INDIVIDUALIZE INSTRUCTION

— Theme for the Year —

INDIVIDUALIZING EDUCATION FOR ALL YOUTH

UNIVERSITY MICROFILMS
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EDITORIAL

INDIVIDUALIZING EDUCATION IN AN AGE OF CONFORMITY

A colleague recently averred, in response to a gloomy comment about the likelihood of mankind's destruction by a nuclear blast, that he was more despondent over the future of man if he did not blow himself up. To him the somber prospects of conformity and the continued desensitizing influences of urbanization, mass media of communication, mass production, and automation were more unbearable than an end to everything in a sudden atomic flash.

While urbanization and industrialization have fantastically increased the material comforts of life, almost to the point of deadly affluence, they have also led to a depersonalization of human existence, and to a deterioration of the conditions which nourish personal values. It is these conditions which compel a search for ways to individualize the educational program which is being provided for all of the youth in the high schools.

Earlier we have commented that quantity and quality are not mutually exclusive (see editorial "Accent on Quantity" in this *Journal* for November, 1958), that bigness need not mean badness, and that education which is highly selective for only a few need not necessarily be good or even better than education that is provided for the many. We quarrel not with the vastness of the educational system. Concern lies in the striking of a balance between the individual and the social claim in an age that careens toward uniformity, on, may it be observed, *both* sides of the Iron and the Bamboo Curtains. True it is that, from one view, schooling aims to transmit the culture, to give the young the intellectual, social, and other necessary accouterments for becoming good Americans, Texans, or San Franciscans, for becoming more like their fellows. This is but one expression of the press of all social institutions to mould humans to prevailing patterns. But this is not the only, or even perhaps the most important task of the school. Recognizing the fatal tendency of the group to swallow the individual, our forefathers wisely insisted upon a Bill of Rights as well as a Constitution. So too they created an educational system as free from state and church control as possible, and assigned to it a primary task of producing individuals: free, unfettered men and women. With an ever expanding physical frontier, individualism, freedom of spirit and action, took root and flourished as one of the dominant values in American life.

At the same time that individualism flourished, there was also a strong equalitarian stream at work, a leveling process washing away to keep the rigid social and hierarchical structure of Europe from becoming established in this country. As de Tocqueville observed in the early part of the 19th century, "The more I advanced in the study of American society, the more I perceived that the equality of conditions was the fundamental fact from which all others seemed to be derived . . . " This led to the claim that everybody was as good as everybody else, and to the assumption that there were no really basic differences between people. Here grew the strong roots of conformity, the urge for all to be like. Until the close of the 19th century and the accompanying end of the physical frontier, the twin forces of individualism and conformity kept each other in wholesome balance. But in recent decades the socializing forces have gained ascendancy, at the same time as the mass of adolescents were kept from the labor market by placing them in high school. Even though it is explicitly accepted in American education that each pupil shall be given an education to enable him to realize the maximum of his talent, a strong tendency persists to equate equality of opportunity with identity of opportunity, a condition not unrelated to our decision to provide each community with a comprehensive school, for both boys and girls. This in turn may, unwittingly, have added to the disposition to emphasize a more uniform program of studies for all pupils. Both the basic and the progressive educational reformers have tended toward more requirements, albeit of a different kind.

After the healthy clearing of the air produced by recent debates over high school education, we may be ready for a new assessment of the balance between general and special education. The question takes this form: how to make certain that the proper liberal education for all may be started so that it will continue lifelong, and how may the unique possibilities within each person be realized, so that the integrity and worth of each become more evident not only to all but to each individual himself? Even in the so-called "required" part of the curriculum concern would then shift more to what English, what mathematics each pupil would take than to whether all pupils must take one, two, three, or four years of mathematics or English to graduate. Although the necessity for more continuous study in all of the subjects persists, is it reasonable to state graduation requirements in terms of the number of years a subject is to be studied? For example, what of the known fact that some youngsters enter high school with greater achievement and higher interest in a particular subject than that with which other pupils will leave high school? Would it not be more reasonable to state graduation requirements at least partly in terms of the individual pupil who is to run the course? This

is not to advocate the anarchy of free electives or the extremes of child centered education that are alleged to have existed toward the end of the 19th century and in the 1930's. Carried to extreme, the path of narrow specialization can entrap individuals in their own subjects and produce a conformity within the specialization.

The time has come to renew efforts, especially as secondary school enrollments continue to mushroom, to make the high school a place where conditions of learning genuinely help each individual to flourish. We must guard against the swing from one uniform program to another.

The need for the accurate assessment of each pupil's capacities, interests, and aspirations and the planning of an appropriately differentiated program for him lies at the base of the high school problem. While our efforts have been in the right direction, candor requires admission of serious shortcomings in present counseling and guidance arrangements, curriculums, provisions for groupings of pupils, and graduation requirements. Examples of an inflexibility which fails to take individual differences into account abound. To be specific: almost all pupils are required to take a full 12 years to prepare for college or occupation. Would not greater flexibility be sensible? The substantial part of one pupil's day by the time he reaches the age of 14 or 15 might well be in work experience, while another pupil might study independently in advanced studies, and be ready to enter college a year or two early. In foreign languages, for example, some pupils are able to master, to a given standard, a second language in half the time that others are able to do so. Furthermore, of those with language aptitude and achievement, it might be appropriate for some to study a second or a third language, while for others this would be undesirable. Further possibilities might be considered in concentrating study of a language for a month, six weeks or a semester, or in providing a summer in intense study at home or abroad.

The question arises, therefore, why should not standards be unique for different groups of pupils in each of the subjects? Furthermore, should not the proportion of time devoted to different subjects be determined by analysis of a pupil's abilities and interests, the environment out of which he comes, and the level and nature of his aspirations? Granted the need for general guidelines of minimum essentials for all, is it not true that such "essentials" must always be considered in the light of the capacities of the pupils?

While the major ideas in the foregoing analysis are not new in the mainstream of secondary educational thought, their re-emphasis is warranted at this time when the crescendo of enrollments continues and higher levels of achievement press even harder. We must be clearer than ever before on the aims of the school. Even though the temptation may

be great to pursue everything worthwhile, we must stick to that which is most worthwhile, resolutely concentrating on high standards of achievement in essential tasks before undertaking lesser ones. Appropriate individualization of high school education, within the framework of a vitalized liberal education for everyone, rests, in our view, at the summit of educational priorities for the next decade in secondary education.

Liberating the mind of each pupil, the aim of a liberal education, cannot be achieved mainly by tinkering with graduation requirements. The heart of the matter lies more in other directions: in the extent to which a studious atmosphere pervades the whole school; in the spirit of intellectual inquiry that characterizes the manner in which teacher and pupil work together; in the intelligent selection of the critical subject matter; in the sensitivity with which the school works with the pupil and his family. These are some of the conditions for individualizing education for all pupils in the comprehensive American high school. The basic criterion for judging new developments in secondary education—be they team teaching, teaching machines, new curriculums in mathematics, science, or foreign languages—is this: do they help to produce a school where each individual is developing, according to his potential, into an inquiring, self-aware, articulate, sensitive, and socially responsible human being?

R. N. B.

NEW LATIN PROGRAM

Special attention will be given to improving instruction in Spanish and Portuguese in schools and colleges, under provisions of the Language Development Program of the National Defense Education Act, it was announced last week. The United States Commissioner of Education said that the new Latin American Studies Program had been singled out for special implementation by N.D.E.A. to support President Kennedy's Alliance for Progress program for the western hemisphere.

The project will include centers for the study of language and related subjects at graduate schools, graduate fellowships for advanced training in a Latin American language, and special institutes for school teachers to be conducted by United States institutions in Latin America.

Particular effort will be made to strengthen instruction in Portuguese, the language of Brazil, which has been neglected by schools and colleges. One of the research projects planned by the program involves the creation of Portuguese teaching materials for high schools.

—*New York Times*, July 16, 1961

THE LARGE OR SMALL HIGH SCHOOL?

BY PAUL M. SMITH, JR.*

Dr. Conant has strongly recommended that the small high school in the American system of education be eliminated in favor of the large one (1). It is implied thus, that academic experiences received by students in the larger high schools are substantially better than those obtained by students in the small situations, notwithstanding the components of motivation, interest, physical and social control.

This difference, if it exists, should be recognizable in those elements of learning which society has designated as important to the welfare of all students, such as competence in the English language and an understanding of mathematics. The manner in which an individual is able to manipulate these skills tends to have direct bearing on the extent of school, social and occupational success in our culture (3). Hence, this study was developed on the hypothesis that the measured language, reading, and mathematical achievement of students from the relatively large high schools would be considerably better than for those students who graduated from comparatively small high schools, and this proportion of difference would manifest itself in significantly higher grades for the large school group after one year of college work.

Method

In order to test this postulate, data was organized with respect to 412 high school graduates who entered North Carolina College during the 1958-59 school year. The extent of accomplishment was established from the scores made on the *California Achievement Test Complete Battery*, Advanced Form X, 1957, in the areas of language, reading, and mathematical comprehension. Grade point average (GPA) was used to denote the outcome of their academic experiences after one year in college.

To show the effect of school size in relation to the performance of students, the name of the high school from which each student graduated (5) and the respective number of full-time high school teachers employed

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during the 1957-58 school term was gathered (2). The size of schools in this survey was determined on the basis of the number of full-time teachers. This resulted in the organization of three arbitrary groups of teacher-sized-schools: 2 to 10, 11 to 19, and 20 to 43. The assumption was made that a school with twenty or more teachers would be considered large although, only one-third of this top group could actually be considered large enough to graduate a class of 100 or more students. In addition, it was felt that three groups would tend to show the progressive effect of performance with regard to the relative size of small to large schools. The analysis of variance was employed to show the statistical significance of mean scores, and the one per cent level of confidence was established as the limit of difference to be accepted as discriminating.

Analysis of Data

The group of schools with from 20 to 43 teachers supplied 39 per cent of the freshman students. However, almost one out of every four came from a local high school. The middle group furnished 30 per cent and the lowest group 31 per cent. In Table I, it is noted that in more than half of the high schools from which freshmen came, there were no more than ten teachers on the staff, and of the 64 schools in this category,

TABLE I

The Number of High Schools According to Teacher-Size and the Corresponding Number of Teachers

Teacher-Sized Schools	Number of Schools	Per Cent	Number of Teachers	Per Cent
20-43	18	15	513	34
11-19	37	31	514	34
2-10	64*	54	494	32
Total	119	100	1521	100

* 12 per cent non-accredited schools

12 per cent were not accredited by the Regional Association (4). Percentagewise there were almost as many teachers in the smallest teacher-sized-group as each of the other two.

Shown in Table II are the means and standard deviations obtained on the four areas of measurement by students according to the teacher-sized-school from which they graduated. Students from the largest size schools made the highest mean scores in all achievement areas except mathematics. Students from schools staffed from 10-19 teachers outscored the students from the smallest size schools in all aspects of achievement

TABLE II

Means and Standard Deviations Obtained by 412 Freshmen Grouped by Teacher-Sized Schools in Language, Reading, Mathematics, and Grade Point Average

Teacher-Sized Schools	Achievement Areas			
	Language	Reading	Mathematics	GPA
20-43				
Mean	106.58	62.53	66.94	1.16
S.D.	9.05	21.67	23.19	.68
11-19				
Mean	103.10	54.14	68.50	1.13
S.D.	7.62	23.38	21.40	.68
2-10				
Mean	100.26	54.80	66.07	1.11
S.D.	8.24	19.23	22.06	.62

except reading. With each group the composite score in reading was lower than the ones received in language and mathematics. Overall, the larger size schools were complimented with the higher scores but, as shown in Table III, when the analysis of variance was applied to see whether any reliable deviation was present between and within the groups, the *F* computed was .958. With two and nine *degrees of freedom* a difference would have to be as big as 8.02 in order to attach significance at the one per cent level of confidence. This discrepancy was not present, thus the truth of an unquestionable disparity was not substantiated.

TABLE III

Analysis of Variance of Mean Test Scores, According to Teacher-Sized Schools, As Measured by the California Achievement Test Complete Battery and Grade Point Average

Source of Variation	Sum of Squares	df	Mean Square	F
Between Groups	34.48	2	17.24	.958
Within Groups	16188.60	9	1798.73	
Total	16223.08	11		

Summary and Discussion

This study was concerned with the proposition that measured achievement of students with regard to skills in language, reading, and mathematics, and average grades earned during the first year in college was of meaningful nature in favor of the large high schools. The analysis of variance failed to confirm this theory. The degree to which both groups

comprehended the basic fundamentals appears to have been similar.

Although the results may be viewed with reservations certain implications seem relevant from this study. Teachers in the small schools do not seem to be any less effective in promoting understanding of fundamentals than their counterparts, or else students in the bigger schools are not taking full advantage of their potential experiences. Also, after one year of college, students from the large high schools are not doing any better proportionately than the ones from the small schools.

Many American educators have the notion that bigness signifies quality and success to the total exclusion of anything small. Yet, there are numerous examples throughout the land of both types of schools doing excellent work. Every child should be developed to his maximum potential but talent may be discovered and developed just as well in one kind of situation as the other if Americans will make up their minds that education is not a money saving enterprise.

But does it really matter whether students graduate from a large high school or small high school, if the instructors, in both, are aiming to teach students to read well, write well, figure well and think critically? Is not our goal to develop these skills whether the students drop out of school, cease education at high school graduation or continue education? Are not these basic learnings the key which will determine the degrees of success whether one becomes a taxi driver or supreme court justice? Is it not true that most of the specific job skills for which an attempt is made to prepare high school students are obsolete before the students begin their senior year? It appears quite clear to a large segment of industry, labor, the professions, and government that what is needed is an individual prepared mentally, physically and spiritually—a person able to take advantage of specific instruction and training because he has a general competence. For what purpose do we continue so much wasted motion, when the obvious leads to constructing student experiences based upon a solid foundation in the 3R's and exercise in reflective judgment. These factors, and not school size, appear to be the main avenues for discovering and realizing potential.

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TEACHER EDUCATION IN LITERATURE: A POSITIVE PROPOSAL

BY ALAIN RENOIR*

In a recent article on the teaching of literature at the secondary-school level, I advanced the theory that the study of great books is more vitally important to the United States today than ever before.[1] As a corollary to this argument, I suggested that teachers of literature should attempt to include in their curriculums only works of the highest literary quality, without regard for the time and place of composition or the immediate timeliness of the subject. I also called forth evidence that certain great books—for instance, *The Odyssey, The Aeneid, Othello*—were likely to prove more stimulating to young readers than more timely but inferior works.

Recent developments in the field of secondary-school teaching have shown that my views are, at least in part, shared by others. For example, it is significant that the last two conferences of the Curriculum Study Commission of the Central California Council of Teachers of English had most enthusiastic and constructive sections on world literature at the high school. One of the papers presented at the 1959 meeting of the National Council of Teachers of English was entitled "Teaching World Literature in High School."[2] In an address given in spring, 1959, to some 350 secondary-school teachers of English, Professor Mark Schorer pleaded for the substitution of great works of literature for the usual historical survey course.[3] More recently, the main speaker at a meeting of prac-

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[1] "The Satellites and the Teacher of Literature," *The Educational Forum*, XXIV, 33-40.

[2] A paper read by James R. Gray at the Denver meeting of the National Council.

[3] An address to a convention of secondary-school teachers of English sponsored on the Berkeley Campus by the University of California Office of Relations with Schools.

ticing teachers and candidates for the secondary-school teaching credential insisted that his most successful assignments over many years of teaching at private and public schools had consistently been works of genuine literary value.[4]

But, if great literary works of all ages and countries are to be taught in the schools, we shall have to train teachers for a task that may at first sight seem formidable. This problem has obviously been lying behind the thinking of many of the men and women concerned with the education of teachers. Indeed, much may be inferred from the fact that, of thirty groups established at the 1959 TEPS Conference to consider the general preparation of teachers, nineteen turned in reports advocating that candidates for teaching credentials at any level and in any subject be required to take some college-level work in the humanities.[5] Though several reports set this requirement explicitly apart from others in English composition and foreign languages, only three attempted a specific definition of the term "humanities." That of Group I-5 is the most detailed and will do for our purpose: "Humanities. All general education programs should include the study of the ideas of man from the ancient to the modern as expressed through the media of philosophical and literary writings and through the creative arts (painting, architecture, and music)."[6] Of the four groups concerned specifically with the preparation of teachers of English, one recommended that the program should include world literature with emphasis on the major writers; another submitted several suggestions, likewise including world literature and using such terms as "good literature" and "masterpieces of world literature."[7] The joint report of the sections concerned with the education of foreign-language teachers recommended that candidates for the credential should have a firsthand knowledge of "literary masterpieces."[8]

The instances cited above make it clear that a representative segment of the teaching profession believes (1) that great books should be taught in the schools and (2) that school teachers should have studied great books. This observation in turn suggests that, in contrast with their forerunners, many American teachers in the middle of the twentieth century are in essential agreement with the views of Matthew Arnold,

[4] An address by Edward Dolan at the fall, 1959, meeting of the English 300 Society, on the Berkeley Campus of the University of California.

[5] Information taken from the *Tentative Report* of the Kansas TEPS Conference. Two other groups made similar suggestions but have not been counted here because they did not actually use the term "humanities." One group gave training in the humanities as an alternative to training in other fields.

[6] Groups 8 and 20 gave almost purely literary definitions.

[7] Groups II-12 and 13a; groups 11 and 13 made somewhat less definite suggestions.

[8] Groups II-14 and 14a.

who insisted that education consisted partly in knowing "the best which has been thought and said in the world,"[9] and those of William James, who believed that the literature worthy of being taught "consists of masterpieces."[10]

Despite the growing strength of the sentiments discussed here, however, little has been done thus far to train teachers of great books for the primary and secondary schools. The cause of this failure lies, I submit, in a basic misunderstanding of the function of teaching on the part of the colleges and universities.

A distinguished commentator on education pointed out some time ago that departments of Education have forgotten that the verb *to teach* takes two objects.[11] Generally speaking, I agree with this statement; but I also believe that many academic departments have laid themselves open to precisely the same accusation. The only difference is that they have forgotten different objects. Many a department of Education thinks exclusively in terms of training teachers to teach the student; many an academic department thinks exclusively in terms of training teachers to teach subject matter: both should begin thinking in terms of their common responsibility to train teachers to *teach the subject matter to the student.*

The most common immediate results of the misunderstanding discussed here are three: (1) the future teacher finds himself specializing thoroughly but often unnecessarily in a limited aspect of the one subject matter he has selected for his major; (2) because his elective credits are taken up by courses in Education, he finds no opportunity to study important aspects of academic fields related to his major—as, for instance, in the case of the future teacher of English who has devoted much time to Barnabe Googe and Edgar Guest but has never read seriously Homer, Virgil, or Tolstoy; and (3) he finds either so little relation or such great disparity in points of view between the work in his major field and the work in his Education courses that he more often than not becomes either completely disgusted or hopelessly befuddled. It is no wonder, then, that so many new teachers complain that teacher education has not prepared them for the job ahead.

The problem, incidentally, is even more confusing for the candidate for the doctorate in Education who wishes to write his dissertation on the teaching of an academic subject. He must either work under an aca-

[9] "Literature and Science," *The Portable Matthew Arnold* (New York, 1956), p. 409.

[10] "The Social Value of the College-Bred," *Memories and Studies* (London, 1911), p. 312.

[11] Professor James J. Lynch, in an address to the Western Regional Conference of the American Association of School Administrators, in San Francisco, spring, 1958.

demic man who may have no interest whatsoever in the problems of teaching, or under a professional educator who may care little about the material itself; even more likely, he will have to work with the two of them and agonize through the impossible task of satisfying them both.

The foregoing considerations go a long way toward explaining why the teaching of great books is not proceeding apace in the schools despite the current enthusiasm. With a few occasional exceptions, there are simply no adequate teacher-education programs for training teachers of great books.

One may further wish to consider the problem historically; for, although the function and the practices of our schools have been under constant scrutiny for many years, we go on preparing teachers of literature to meet a situation that no longer exists. There was a time when the high-school population was mainly composed of candidates for admission to liberal-arts colleges. At that time, a substantial part of the curriculum in the secondary and occasionally in the primary schools was devoted to languages and literature. In the process of taking at least four years of English, Latin, French or German, and sometimes Greek, the student would at least see something of Shakespeare, Virgil, Molière or Goethe, and perhaps even Homer.

Today, nearly all of our schools must of necessity cater to a population that has little use for foreign languages and cannot reasonably be required to study them. The only teacher of literature with whom the average schoolboy or girl is likely to study is the teacher of English. It logically follows that the task of teaching masterpieces of world literature has become almost exclusively the duty of the teacher of English; and yet, we insist upon training him exactly as if he were still to share this duty with the teachers of ancient and modern languages.

I am by no means suggesting that the teacher of English must usurp the roles of his colleagues in foreign languages. What I am suggesting is that, besides training teachers of English, Latin, Spanish, and the like, we must also train teachers of great books and English composition who will be adequately equipped to fill a most important gap in the education of the young American today. I am throwing in composition with great books for two reasons: (1) the teacher of literature is usually expected to teach composition as well, and (2) the teacher who scrutinizes distinguished writings with his students has ready at hand the most effective tools to teach composition.

The program necessary to prepare teachers of great books and English composition could be readily established within the frame of most teacher-training institutions. The suggestion which follows is not presented as the only correct means to this end, but merely as an example of what *could* be done.

1) The department of Education and the departments of literature should collaborate in an investigation to discover which genuine masterpieces of world literature can most effectively be taught in the schools. From these, they should draw a basic list of very few—perhaps as few as ten or twelve—titles which every candidate for the credential would be expected to master.

2) Each candidate would take the regular freshman and sophomore courses in English, at least one semester of advanced composition, one upper-division semester apiece on Chaucer, Shakespeare, and perhaps Milton, and one semester on the English and American novel.

3) Each candidate would take one upper-division semester apiece on at least two of the ancient authors on the basic list studied in the original language, and repeat the process with two modern foreign authors.

4) Each candidate would take at least a one-year upper-division course on the great books in the basic list studied in translation but very thoroughly.

5) Each candidate would take at least a one-year upper-division course on the philosophy and method of literary teaching. This professional course would draw some of its materials from the basic list for the entire program.

Two advantages of this or similar programs are obvious: (1) the holder of the credential would be thoroughly acquainted with the giants of the Anglo-American literary tradition, as well as with several ancient and modern foreign masterpieces, some of them studied in the original languages; (2) at least one professional course would have some basic material in common with the required academic courses, thus obviating the usual students' complaint that Education requirements never have any relation to their major field of study.

These suggestions could easily be embodied in either a four- or a five-year program. The foundations for the latter are already laid in the existing programs for the Master of Arts in Teaching, for instance, at Harvard and Wesleyan. At some institutions, the former might be worked out as a common project of the departments of Education and Comparative Literature. In any case, it would encourage professors of Education and professors of literature to join forces in the common cause of preparing teachers *to teach literature to the student.*

ADOLESCENTS IN OTHER WESTERN CULTURES

BY LEALAND D. STIER*

During the past few years, many comparisons have been made concerning the educational achievements of adolescents in the United States with those in certain European countries. While these have been valid studies, little has been said about the adolescent cultures in which these youth live. To the student of adolescent growth and development the culture in which youth find themselves is as important as their educational achievements. It is only natural, then, for the student of youth to wonder whether the European adolescent varies greatly from the American youth by reason of his culture.

Adolescence in America has often been described as a period of turbulence. The adolescents' existence is often said to be in the area of "no man's land" for they find themselves in a world of adults, under adult direction and supervision where they receive constant free advice whether they desire the same or not. They find themselves always having to "conform" to patterns that are not of their making nor necessarily their desires. In the criticisms often directed toward these "irresponsible and lazy youth" we are comparing them with adults in our world. Nothing can be more false or unfair to the youth of today. It has been said that when we, as adults, become insecure and uncertain about the world we are to leave, we immediately transfer our doubts, fears, and uncertainties upon youth in the criticism of the modern generation.

In order to make a comparison of the adolescents in the cultures as found in England, France, and Italy the investigator traveled extensively in the three countries. There is a lack of research concerning youth in these countries. The studies of youth in Europe compared with those conducted in the United States have been limited in scope. In most libraries in Europe the major materials on the psychology of children and adolescents were from American authorities.

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Ideals and the Adolescent

The family unit plays a significant role in the development of values and ideals of youth. Authorities have pointed to the area of values which influence the life of each individual as a necessary part of the well adjusted member of society. These values become as complex as the families and cultures in which one finds himself. Evaluation is difficult. In reporting studies and investigations in this area of development a comparison is difficult since all investigators in each of the countries studied use different techniques and areas of investigation.

Four general areas seem important in the discussion of values and from these one can discern the probable values which are held important by youth. These areas are: (1) the aspirations of the adolescent reflected in his economic world—the type of positions to which he aspires; (2) the type of person the adolescent would like to become; (3) his interests in the arts, literature, and music; and (4) his religious beliefs and concerns.

French youth questioned in a recent study (13:202-203) held that intellectual honesty, moral honesty, courage, generosity, intelligence, sincerity, charity, and love were important values in the life of an individual. When questioned as to their influence over events in their life 35 per cent felt they were entirely at the mercy of events whereas 58 per cent felt they had some influence over the events which influence their lives; however, of the latter group 17 per cent felt the influence they could exert was dependent upon the character of the events. In France 78 per cent of the youth indicated that they must have an ideal for which they could live yet only 41 per cent felt that they possessed such an ideal.

Remmers (15) in his study of American youth found that 33 per cent felt there was nothing they themselves might do to prevent another war, and 41 per cent felt it was not worthwhile to send letters or telegrams to their congressional representatives. Twenty-six per cent admitted that their life was pretty well planned for them, implying that they felt they had little control over the events or course of their life. Obedience and respect for authority was a value held by most American youth with 75 per cent of those responding answering that this was a most important value.

Italian youth in secondary schools and colleges (a limited sample) indicated service to humanity as an important ideal in 7 per cent of the cases; 9 per cent wanted personal success and notoriety as an important person; and 40 per cent were content to be satisfied with the simple things in life. (1:313)

Fleming, in his study of the social psychology of English youth found that they had a great desire for mental adventure and rejected the routine type of job. This is in direct contrast to their acceptance of status in a

well-defined society. These youth expressed a positive attitude toward the sources of knowledge and the possession of knowledge. They were extremely conscious of their development and gave a great deal of attention to their elders. An English youth accepts the station of his father and feels that the American youth is under more pressure to "outdo his father." (3)

The ideals and aspirations of the youth are tempered by those experiences reflected by their parents as a result of the recent tragedies of life brought about during the last world war.

In describing the kind of person they would like to be, the usual professional occupations were listed by those questioned: engineering, medicine, law, positions of trust in industry and commerce. Lower class youth listed these as levels of occupational work to which they should strive in spite of the acceptance of one's station in life. Lower class people indicated desire to improve themselves and to free themselves from the status they accept. Many European youth list government service (including military service) as a desirable occupation. Government positions of service are held in high esteem by the Europeans as reflected in their career life.

Young girls reflect their status as members of society and their position in home occupational choices. Sixty-eight per cent of the French girls indicated work in shops as a most desirable position. The need for women to work is seen by the number of women employed in industry and commerce. (13:334)

Italian youth listed the types of person they would like to become. (1:314) Thirty-four per cent of the boys listed a champion sportsman as their first choice. Other choices in order of their importance were the reporter, industrial worker, writer, and diplomat. Nineteen per cent of the girls selected the writer as the ideal person while 16 per cent selected the reporter and 13 per cent selected the champion sportsman.

Intellectual interests of youth in literature, music, art, and science are similar in the European countries and comparable with those of American youth. Those with limited educational opportunities find popular music and popular literature (adventure, romance, mystery) most fascinating and of most interest. Those with a higher educational development select the "masters."

Science as a college major was selected by 30 per cent of those attending college in France. In England 22.6 per cent of the students selected science. In Italy 3 per cent of the young men indicated science as a choice of study. Since feminine enrollment in institutions of higher learning is limited in European universities few figures are available on the basis of sex interests. Remmers in his study found some startling attitudes held by American youth toward scientists. (13:164) Nine per

cent felt that one can't be a scientist and be honest. Fourteen per cent thought there was something evil about scientists. Thirty-five per cent believed that it is necessary to be a genius to become a good scientist, and 45 per cent believed their own school background too poor to permit them to choose science as a career.

The values of youth indicate a confused trend among the adolescents. Can the school and social institutions mold and improve the values of youth or is the basic influence of the family and its social and economic position in life the determinant of the individual's values? More research will be needed before an answer can be found to determine the exact role each institution of society plays or can be expected to play in the development of values—individual, national, and world-wide in nature.

Social Life, Family Life, Personal Problems and the Adolescent

The *social life*, interests, and activities of youth are similar throughout the western world. There is a common trend among the youth—they are particularly interested in the here and now, the modern, more than they are in the past. They are proud of their culture, their heritage, and the visible forms of the arts which express this such as their churches, their cathedrals, and other great treasures which western Europe has given the world. The European youth, however, has difficulty in understanding America and its lack of stability as expressed in its history.

Compared to the activities and opportunities available to the American adolescent, those in the three countries visited are extremely limited. The feeling of contentment among the European youth with the few activities available to them is indeed striking. While they long for hot rods of their own, drag strips, and other items quite common to American youth, their desires are well adjusted within the framework of their financial abilities. This contributes to the all-around adult-like attitudes found among many of the youth.

Major activities engaged in by these youth center about dancing, the cinema, music, their parks, hiking, bicycling, and camping. One of the major activities of youth is dancing. When one asked a young man what he did on his night off, his face would light up and he would answer, "This is my night to go dancing." The cinema is well attended by youth. England has been concerned about gambling, drinking, and aimless activity on the part of their youth. A survey indicated that about 24 per cent spent one evening a week just sitting around and talking with friends. The average boy was out three nights per week and the average girl about two nights per week. The cinema was the first choice of "go-out" activities. The fears of youth workers and social workers were allayed. (2:33-52)

The "expresso bar" and the sidewalk cafe are rapidly becoming the

favorite places of youth in England as they have been in France and Italy. Here they can play the "pin-ball" machines, listen to the latest in popular music from their own popular musicians as well as records from American favorites. Both of these are recent innovations from America as is the "hot dog" which established itself as a favorite adolescent food, and the hamburger is rapidly growing in popularity.

Attendance by youth at the opera, the theatre, and concerts in the park was striking. These young people are intensely interested in these activities, and one is equally excited as they are when their enthusiasm for a performance is expressed in their sincere and uninhibited way. To the casual observer interested in adolescent reaction one actually "tingles" with their expressions of gratitude. That the Italian youth love music is true, but love of music is also true of the French, English, and Austrian youth as evidenced by their attendance at the concerts and the opera.

Transportation is always a problem of youth. They do not possess cars in any number equal to American youth. Where it is common to have 50 to 70 per cent of American youth drive their own cars to school or have access to their family car for dates and outings, the European youth either walk, ride their bicycles, or their scooters. They enjoy their parks and their countryside. Many engage in hiking and cycling as weekend activities. A walk through the parks will often find many groups of young men playing their favorite national sport of soccer.

The interests, desires, and wishes for many of the activities engaged in by American youth is intense. Many of the questions directed to the American visitor are concerned with our educational facilities, our social activities, our national games, and the "hot-rods" which so many American youth seem to have. They, too, would like these, but they accept their restrictions gracefully and with little envy.

In considering *family life* the visitor to these countries is impressed with the action of the young in relations with their parents. The lack of youth walking aimlessly about the streets was equally impressive. On a Saturday the casual stroller will find the children and the adolescents alike with their parents and immediately the respect exhibited becomes impressive. True, there are the same wants and desires of these young people to have things of material gain, but many know this is impossible and are happy with the expression of delight and wish. One of the questions asked the young people interviewed was that of parents understanding their problems. The majority answered that they felt their parents did understand their problems.

Industrialization and mobility of population within each of these countries is influencing the family pattern. Bartolomeis (1:275) states that as new ideas and systems become a part of the families, problems arise.

Parents find it difficult to give way and replace their dominance over

their children. They need additional education in order to understand that it is possible to exert influence over their children with a new approach. Parents, states Bartolomeis (1), who give unconditional freedom to their children in any culture are merely trying to hide their negligence or impotence as parents and hide behind the idea that youth are not doing anything wrong. While it is understood that child-rearing patterns are gradually becoming standardized through the introduction of new ways, a common ground of adolescents in relation to their parents is rapidly developing—the distance between the family and the adolescent is widening and communication becomes a major problem due to the newly found freedoms experienced by youth.

Class status and structure are more noticeable in Europe than in America. The acceptance of "status" by youth in Western European countries does make for a more mature appearing adult than found in the United States. A European youth accepts this status as contrasted with the American youth who is constantly trying to improve himself and raise himself out of his social class. As the mobility and industrialization of these countries continue, will this change?

Comparison of *personal problems* of European adolescents and those of American youth is difficult since research among European youth has not been as concerned with the popularity of youth and problems related to this phase of life. Remmers (15) in his most recent study found that about 10 per cent of the American teen-agers have relatively serious problems such as "often feel lonesome, feel blue much of the time, am easily hurt, and do things I later regret." About one in four had problems such as "I worry about little things; I must always be on the 'go'; I'm nervous; I have guilt feelings about things I have done; and I'm ill at ease." Most of the adolescent boys and girls having these problems are reported to come from low income groups.

Sex and dating are also major problems for American adolescents. Twenty per cent of the 11th and 12th grade girls are concerned with whether they should kiss on their first date. About the same number ask how far they should go in love relations. Boys still admit that their largest source of sexual information stems from secret meetings where they discuss their new found information and wonders. Nineteen per cent of those studied indicated that they avoided discussing sex with their parents.

The moral code of adolescents is dependent upon the home and the cultures within which they find themselves. European youth indicated that they, too, have the same problems as our youth concerning sex, dates, and other personal areas.

Eighty per cent of the French youth (4:332) feel that love is of great importance to them, and 91 per cent say that fidelity in love is essential.

Patey (12) states that English youth are concerned with the problems of growing up which arise from the instability of not knowing where they stand. They ask questions about petting and the degree of intimacy expected on a date. Boys wonder if they will be classed as less than a man if they are not prepared to "go that far." Logan (7:333) finds a new attitude developing in English youth concerning the problems of social relations even though they still have the same questions and are still bound by traditional behavior in sex; however, he feels that English young men as a group are still retarded when compared with the American counterpart.

The youth in France and Italy appear to be happy and enjoy life. Sixty-two per cent of the Italian boys when asked about happiness in life reported they were optimistic about their life as compared to 52 per cent of the girls. Giroud (4:332) reported that 24 per cent of the French youth were very happy and 60 per cent were happy and 14 per cent were not happy with their way of life.

Juvenile delinquency is a problem in every country. Some visitors to France, England, and Italy have come back with glowing terms of the slight amount of juvenile delinquency; others indicate that their problems are as serious as those we face in the United States. Before one can accurately judge the amount of juvenile delinquency and compare this with the figures of American delinquency it is necessary to study the nature of a crime in these areas and the natural deterrents to crime as a part of the cultures. Our youth have been compared unfavorably in some instances.

Juvenile delinquency is a major concern in England and the number of crimes is reported to be increasing steadily. Italy had often been upheld as a model and the role of the father has been indicated as being the major reason for the lack of such delinquency. A study of Italian youth reveals wide variations of behavior of youth in southern Italy as compared to northern Italy and other local areas. The distinction lies in what is termed a crime. The writer was impressed with the iron doors and mesh screens which were pulled down by the store owners during the noon hour and at night closing. One could not walk down the streets of Rome and see the beautifully decorated store windows such as in the United States, England, and northern France. One was impressed with the number of young men involved in procuring for prostitutes in one section of southern Italy. Perhaps these are not crimes until you are caught, but involvement in these kinds of activities suggests that according to our standards and morals American youth may come off more favorably than is often thought. Kohler (7) in her article on delinquency points out three factors for less delinquency in Europe than America: (1) Americans are more hostile towards adolescents than are Europeans; (2) Americans are more obsessed with prolonging the childhood of our ado-

lescents; and (3) Europeans treat delinquency differently than we do—they are not as concerned with scientific methods, but with treatment from the "heart." The European plans for combating this problem are improvised as they go along. Much more time is spent on prevention than is true in American life.

We have much to learn and much to discover in the treatment of adolescents, especially in a democratic society. The question of education for the social discipline which a true democracy requires is of vital importance since it does not possess many of the clear, concise, and direct purposes of a society such as found in a communistic state. Much study and research are needed in the future.

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THIRTY-ONE RULES FOR CLASSROOM DISCIPLINE IN JUNIOR HIGH SCHOOL

BY EDWARD C. PENN*

Most problems of school discipline can be classified readily. Few new disciplinary situations occur in any school. For instance, Bill and Jack had a fight outside the school building; John threw a book at Bill and in the mixup hit Bert by mistake; Mary chewed gum in class; and Pat was caught smoking in the lavatory or else did not behave properly in the cafeteria. Year after year the same old story repeats with only faces and dates changing. The principal or the vice principal knows the usual pattern, and so do many of the teachers. How much better would it be if the teacher were prepared to meet these situations as they arise and had a pattern or procedure for their disposition.

First, we can assume a teacher governs best when he does not seem to govern. It is well to remember that it is much easier to prevent discipline problems than to correct them. This type of control comes from the pupil's feeling of belonging and an awareness that what he is learning is of value. Likewise it is safe to assume that it is the teacher's responsibility to control the class and to know the pupil. A wise teacher, too, knows what a pupil cannot do and by skillful handling can canalize the flow of "devilistic" behavior, for regardless of what is said it is axiomatic that no fury can be as great as a class of badly disciplined youngsters who get out of hand.

One of the worst drawbacks of classroom discipline is reflected in the story of the teacher who sends a boy or girl to the office and then retorts, "I sent him to the office and they did not do anything." From an admin-

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istrative view, if a pupil is sent to the office for any triviality it takes little thought to realize how quickly this technique loses its effectiveness. Unquestionably many of these minor items can be eliminated by taking a personal interest in the student or by speaking to him directly about the problem. Here, too, maintaining a pleasant manner or addressing the student in a courteous manner, using the terms "please" or "pardon me," can be most helpful even if at times it is hard to do. Adapting levels of work to needs and abilities and the occasional learning of how to laugh together with pupils eliminates many of the so-called pitfalls of discipline and helps to relieve tension.

Still there is no clear formula for handling discipline and in many instances the teacher may run across a case that cannot be solved. This, then, is one of the sorrows of a teacher's life. In many instances a teacher may exercise discipline from without. However, discipline is everybody's job and a firm, consistent insistence upon good manners and correct conduct should be maintained at all times.

Following is a composite of the various discipline techniques tried and tempered in the crucible of time by members of the Hamilton High School faculty, staff, and Principal Carl Ehmann. We realize the shortcomings of our study and are equally cognizant of the fact that it is easy to like the young because they are young. Still we do not have our feet planted solidly in the clouds nor do we divorce ourselves from reality for we know the seriousness of the discipline problem in the overcrowded classroom.

1. Talk to the pupil after class. This is a mild punishment which will solve many minor problems. The talk after class should be friendly and will, in many instances, establish a personal relationship in which the pupil feels you are anxious to help.

2. Many times, changing seats may solve problems. If this is done, insist that pupils be in their right seat.

3. Whenever possible avoid an open clash. If punishment is used make certain that the pupil understands the "why" of his punishment. No punishment should be doled out when one is angry. Statistics prove that kindness and sympathy, lined with firmness, rate high on the list of solving discipline cases. It is wise, too, to defer punishment so that the offender may see the error of his ways. Also, do not punish the group for the offense of one or two as this is a certain way of losing class support.

4. Do not threaten pupils unless you intend to carry out your threat.

5. With slow groups alternate the work: written assignments, discussion, and drawing. Slow groups, too, are fond of making charts and graphs. Try to have pupils obtain satisfaction in what they do. Remember to praise and to give an occasional pat on the back for good work.

6. Ask an extremely noisy person to stand. This causes a degree of

uncertainty and gives the teacher a chance to explain the improper behavior. This method at times catches the attention of others and makes it easier for the teacher to proceed with the lesson.

7. Sometimes enforced silence helps. It is better to wait for pupils' attention than to try to talk through a noisy group. Watching a clock and asking them to come to order within thirty seconds works well. Another helpful measure is to stop the work two or three minutes before the period ends to tidy the room.

8. In the library or in the halls, if the class is noisy, the teacher may take the class back to their seats and explain why quiet and order are necessary. In the early stages of this technique it may be that a teacher will cancel a library period or a film and then substitute other forms of work.

9. When books are hidden or things lost, tell pupils that you will leave the room but when you return you expect the lost item returned. Sometimes just saying, "You've had your little joke, now let's get back to work" will solve the problem.

10. Stress values of work in daily work or in outside endeavor. You can point out how former students or class members have been helped.

11. In *extreme* cases you may deduct points from a semester grade, but by the same token you should grant pupils the chance to make them up.

12. In severe cases, and in using a referral, show it to the pupil outside the classroom. If this helps, give the pupil another chance. This avoids the open clash and points out to the class the element of fair play.

13. Make certain that the severity of the punishment does not cause embitterment. Be ready to discuss the reasonableness of the punishment with the pupil.

14. Use the office files to obtain as much information as possible, such as the broken home, poverty, or other conditions. In this way you may get at the basis of the difficulty and thus aid in the final solution.

15. A telephone call or a letter will indicate that the teacher is trying to help. This should be discussed with the counselor and vice principal in order to assist with background material. It is advisable to have a duplicate of the letter on file for follow-up on the case.

16. At all times be calm. A grownup, in a fit of temper, always looks awkward in dealing with youngsters. If you do lose your temper make certain that you calm down as soon as possible. This is a must!

17. At all times keep the students as busy as possible. Many experienced teachers put lessons on the board at the beginning of the period and have the students copy them. This, in all probability, may add to the learning situation and is effective with slow learners.

18. In many cases one can avoid problems with a quick retort. For

the chronic "I want a drink" type you can reply "I'm not thirsty." If you name a student and get the usual response "I was not talking" your answer might be "I did not say you were."

19. Changing seats of noisy groups aids immeasurably. I mention this emphatically for many teachers overlook this point.

20. Establish routines with slow learners such as keeping notebooks, units, and mimeographed questions and answers.

21. Place the name of the student on the board with moderation. For instance, tell the pupils that putting down the name is but a warning. If a check appears after the name it means a ten minute detention. Your class president can be used occasionally to take charge of the class and to put down names if necessary but this must be done with caution for it may lead either to putting down too many names for the sake of doing something or to bitterness against the student in charge.

22. Many teachers talk too much. This is rather a blunt way of phrasing it but a new teacher, or one with a slow or unsettled group, should talk as little as possible.

23. Class morale can be kept high with praise and by the willingness of the teacher to take part in after-school activities or merely to be around for a short, casual after-school chat.

24. Walk around the room while the pupils are working. If you have a noisy person or group, stand by them. This is a simple method which is most effective.

25. Teachers should be friendly, but at the beginning of the year a certain reserve should be maintained until better understanding of the group is obtained.

26. Do not have a sense of emergency when you are disturbed by a sharp remark. It is wise to maintain your composure, perhaps remarking, "Very well, you have had your say; now let's get back to work."

27. Bring in parents, especially when they are effective in bringing about a change. We should realize, however, that some parents are not as effective as others.

28. Ideal discipline does not mean that the classroom has to be absolutely quiet. Quietness should not be confused with discipline.

29. Teachers should always work together as a team. When assigned to hall duty make it a point to be there and on time. Your presence will be enough to deter running, pushing, and other dangers to school safety.

30. Admittedly, talking to some does get the desired reaction. With others suspension may serve the purpose. Pupils react differently to different situations and in many cases one has to feel his way through a problem.

31. With a child old enough to reason it is imperative that the punishment and the reason for it be understood if any good is to be obtained.

WHAT'S HAPPENING IN CALIFORNIA SECONDARY SCHOOLS

BY WILLIAM N. McGOWAN*

North Junior High School, Downey, has been conducting experiments with algebra offerings at the eighth grade level. Upon enrolling new seventh graders in the fall, one top class of forty students out of an enrollment of approximately four hundred is selected by recommendation from teachers of the five contributing elementary schools. Upon completion of the seventh grade, this select group is given various forms of tests. The test results, along with teacher recommendations, are used as a basis for organizing the eighth grade mathematics class.

Principal Gordon Griffiths reports a summary of tests given under direction of the special class instructor, Mrs. Mary Lou Busby.

First class–1958-1960

NEDT–of 29 students, 18 scored in the 99 percentile
Class average was 97.6

CAT–(high school form) grade expectancy was 9.1
15 of 29 scored 16.5 in fundamentals
Class average in fundamentals–15.6
Class average in reasoning–15.2
Average improvement over two years was:
Fundamentals–6.6 years
Reasoning–6.2 years
Test measured only to 16.5 so results are not conclusive

Second class–1959-1961 (29 pupils in class)

STEP–22 scored from 94-99.9 percentile
5 scored from 88-93.9 percentile
2 scored from 86-87.9 percentile

* Executive Secretary, California Association of Secondary School Administrators.

CAT–(high school form)
22 scored 16.5 in fundamentals
Class average in fundamentals–15.9
Class average in reasoning–15.5
Average improvement over two years was:
Fundamentals–6.1 years
Reasoning–5.8 years

Montclair High School, Chaffey Union High School and Junior College District, after two years' experience with a special arithmetic program, reports an evaluation of students with respect to the development of arithmetic skills. Orval L. Petersen, Science-Mathematics Coordinator, makes the following report:

If one were to refer to the Montclair High School's Curriculum Guide he would find this statement regarding the school's philosophy of the role and responsibility of the teacher in the maintenance and development of arithmetic skills and competencies in students.

> "All of the principles involved in this list* (refer to the Curriculum Guide, pp. 32-33) of competencies have been taught in formal arithmetic sometime during the first eight grades. Obviously not all students will have achieved the same operational level; in fact, the average class will present a measure of spread of five years. Regardless of the level, what is needed by all pupils is a program designed to maintain the competencies of each pupil. Maintenance is promoted by two procedures. One is to 'overlearn' through continued practice and the other is to put to use the skills learned. In both procedures, the learning experiences should be varied rather than repetitive if meaning is to be extended and deepened. Rather than require another year of 'practice' in formal arithmetic, we will use the above competencies in science, industrial arts, business education and homemaking. The 'uses' must be a *planned* part of the instructional program in the areas indicated."

During the 1959-60 school year about 60 per cent of the ninth grade class was enrolled in the first year mathematics course of the school's four-year sequential Functional Mathematics program. No required mathematics course for ninth grade students was offered since the program outlined above in the Curriculum Guide was put into operation and carefully carried out.

* The list notes the mathematical competencies felt essential for "general education" stated by the Bureau of Secondary Education, California State Department of Education, in the booklet entitled, MATHEMATICS IN CALIFORNIA PUBLIC HIGH SCHOOLS, published July 1956, pp. 20-21.

In order to objectively determine the effectiveness of the program with respect to skills development through planned use of arithmetic skills by students in other courses than a required mathematics class, an evaluation study has been made. It must be emphasized that the evaluation considers skills development only and does not measure the functional application of the skills. (The evaluation of the formal mathematics courses themselves will be made at a later date when evaluative tools are found or devised which measure the objectives of the mathematics course program; namely, the functional application of mathematical skills and concepts.)

The evaluation was carried out in the following manner:

1. All entering ninth grade students were given the STEP mathematics test (which primarily measures arithmetic skills) in the fall of 1959.
2. All of these same ninth grade students were given the tenth grade form of the STEP mathematics test as sophomores in the fall of 1960 one year later than the first test was given.
3. Converted scores were determined and recorded on each of the two tests for each of the 186 students involved.
4. The numerical difference between the first and second test scores for each tenth grade student was determined and it was noted whether or not this was a gain or loss.

   Examples: a) One student had a score of 240 (converted score) on the first test and a score of 250 on the second. This would be recorded as a gain of plus 10 in mathematical skills development.

   b) Another student had a score of 240 on the first test and a score of 236 on the second. This would be recorded as a loss of minus 4.
5. The plus and minuses as determined from step 4 above were recorded on a graph with the students who had taken a formal course in mathematics in the ninth grade being recorded separately from those students who had not.

The results of the tabulation indicate the following:

A.

Per cent of students who *did not take* a formal *mathematics course* who scored higher on the second test than on the first. (Indicating skills development.)	Per cent of students who *took* a formal *mathematics course* for a year in the ninth grade who scored higher on the second test than on the first. (Indicating skills development.)
71.4%	76.1%

B.

Per cent of students not taking a formal mathematics course who scored the same on both tests. (Indicating maintenance of skills with no loss or gain.)	Per cent of students taking mathematics course who scored the same on both tests. (Indicating maintenance of mathematics skills with no loss or gain.)
3.1%	3.5%

C.

Per cent of students not taking a mathematics course who scored lower on the second test than on the first. (Indicating a loss of competence in mathematical skills.)	Per cent of students taking mathematics course who scored lower on the second test than on the first. (Indicating a loss of competence in mathematical skills.)
25.5%	20.4%

The results of this evaluation seem to indicate that ninth grade students develop in arithmetic skills both in and out of formal mathematics courses when such skills are practiced in planned ways. About the same percentage of students showed gains in arithmetic skills development among those who took a year course in mathematics as compared to those who did not. This seems to imply that planned arithmetic skills practiced in classes other than mathematics produce results comparable to those attained in the regular mathematics course.

PLANS OF HIGH SCHOOL SENIORS

Of this year's crop of high school seniors and juniors, *Scholastic Magazines* report, 63 per cent expect to go on to college; 19.6 per cent are undecided, and only 17.3 per cent have definitely decided not to go. But only 35.5 per cent of those headed for college expect to have enough money of their own, or from family or friends. Four out of five count on part-time work; one out of four expects a scholarship; 7.6 per cent intend to borrow and one out of four isn't sure what to do.

—*Education USA*, April 28, 1960

SYMPOSIUM

Using Team Teaching To Individualize Instruction

In the profusion of new developments in education, none appears more vigorous than team teaching. Large and small secondary schools across the nation have attempted some parts of the plans outlined by J. Lloyd Trump. Schedules and instructional methods are being modified. New concepts for grouping of pupils are emerging. School architecture is beginning to reflect these changes. Yet, in spite of widespread enthusiasm, many schoolmen remain skeptical. The introduction of team teaching into a school presents difficulties.

Fashioned from ingredients both old and new, team teaching has developed into a cake of many colors. In some schools team teaching is an all-inclusive term to describe any step taken to improve instruction. In others, only the most thorough revision of a traditional program is defined as team teaching. No one brand exists. It might be likened to the elephant as "seen" by the three blind men, each of whom based his description from the vantage point at which he grasped it.

It is too early for a definitive evaluation of team teaching. But as an important facet of the larger instructional revolution which with breakneck speed is streaking across the educational horizon, team teaching merits interim report and study. How effective has it been in improving instruction? Are pupils being given more undivided attention? What patterns of team teaching appear most promising? To what extent are current practices revising original estimates of the effect of team teaching? Questions such as these have shaped the symposium which is offered this month.

THE TEACHING TEAM IN ACTION

BY NICHOLAS C. POLOS*

Historians are fond of the line in Ecclesiastes which reads ". . . and that which is done is that which shall be done: and there is no new thing under the sun." Quite possibly the historian is attracted to these lines because they seem to imply a stream of causality. On the other hand, however, ideas such as this offer man a great temptation, so that in a daring and adventuresome way he continuously tries to prove that—there *is* something new under the sun! Strange human behavior such as this though, sometimes gives rise to Shakespearean outbursts which leave little doubt but that mortals are indeed fools. One can become attached to the bard's more cynical portrayals of man, especially when he says: "Man, proud man, drest in a little brief authority . . . his glassy essence like an angry ape, plays such fantastic tricks before high heaven as make the angels weep."

While running the risk of joining Shakespeare's "angry apes," I would like to submit that in this space-age world with its technological revolution, there is indeed a concomitant revolution going on—in the area of educational affairs!

The focus is on change, and this is understandable. "We are," writes Walter Lippmann, "entering upon an era which will test to the utmost the capacity of our democracy to cope with the gravest problems of modern times." In this era of experimentation, educational leaders are responding to the challenge by investigating new ways to train teachers and to use technology.

One thing must be clear though to all of us in education. If we introduce machine operations, i.e., educational television, teaching machines, etc., into our educational horizon it is primarily for the purpose of aiding the teacher in the job of teaching. The teacher is the central figure in our educational enterprise.

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Since the teacher is the key figure in education it is necessary to use our teaching personnel wisely; the "teaching talent reserve" is low today. There is another important reason for conserving the energies of our teachers. "The function of a teacher," says Alexander Meiklejohn, "is to stand before his pupils and before the community at large as the intellectual leader of his time. If he is not able to . . . take this leadership, he is not worthy of his calling." Obviously, the teacher can hardly be an intellectual leader collecting milk money, filling out endless administrative reports, grading innumerable daily papers, and doing the many, many things which have little or nothing to do with real teaching.

Here we have a situation which is not uncommon in American education, where too often the students are cheated by an educational system created for convenience and not for learning. In his famous essay on bureaucracy, Max Weber diagnostically analyzes this dangerous situation so critically that one becomes uneasy and begins to look for shadows at every turn. Weber argues that bureaucracy creates a life of its own. For example, in educational institutions the bureau stands alone while education stands on the other side of the chasm, and in a "nightmare reversal" the bureau states certain goals to justify itself; goals, he claims, that may be mythical. Consequently, concludes Weber, when education is highly organized to a great extent the main purposes of education are defeated!

In the past ten years American educators have become aware of this cancerous problem, and have attempted to seek a cure by formulating plans for teacher's aides like the Bay City, Michigan, and Fairfield, Connecticut, experiments. In order to free the teacher, and thus "improve the quality of education," New York City, Utah, Colorado, Iowa, and Minnesota have all put into operation some form of the plan for teacher's aides. Student teachers, lay readers, college trained adults in the community, and clerical workers are all being used as aides today. The idea is spreading, and has even embraced lay-reader experiments like the so-called Rutgers Plan. The extent to which teacher's aides are used in the various subject areas appears to follow the same ratio as the extent to which attention has been given to team teaching and to student grouping for special purposes. This use of aides is a distinct departure from the past, particularly from the monitorial system that flourished in the United States a century or so ago, in which aides were used to educate large numbers of children inexpensively—and inadequately.

One outgrowth of the teacher-aide plans is team teaching. Expanding the aide-plan concept of freeing the teachers from nonprofessional chores to concentrate on more valuable contributions, team teaching is based on the idea that talent is wasted, the teacher frustrated, and education watered down when all teachers, regardless of background and ability are treated alike. These conditions could be improved by grouping teachers

into teams, each led by a master teacher. Team teaching would then provide a necessary "hierarchy of teachers," with different levels of skill and competence, and teachers paid accordingly. The prospect of attaining a superior position, with concomitant rewards, would likely attract more talented people to the profession thus greatly aiding recruitment efforts.

Team teaching allows a group of teachers to pool their knowledge and talents in the instruction of a larger number of pupils than an individual teacher could normally handle alone. In this sense team teaching is really "team-planning," and it carries into the schools the old principle of the divisions of labor, and takes the teacher out of the isolation of the self-contained classroom. *A fortiori*, the team concept provides for the highly gifted teacher to be assisted by others, trainees, aides, etc., who perform the essential semi-skilled tasks. Who can resist a plan which allows teachers to teach![1]

Teaching teams fit no one pattern. They are of various sizes and compositions. They are usually concerned with one subject field, but their function and purpose sometimes take them across subject field lines. They all aim at one target—educational excellence! Evanston Township High School, for example, is organized on a schools-within-a-school plan, with four separate divisions. Teachers, however, are not divided among the four divisions but teach school-wide courses. The school's teams plan together, coordinating whole courses of study in various subjects. At the older Newton High School and the new Newton South High School, there are subject matter teams and teams made up of entire staffs of the separate schools-within-a-school, or "house," plan under which these high schools operate. The more imaginative teachers engaged in team teaching say that the variety of things a teacher can do in team classes is almost endless. Furthermore, teaming provides a setting in which teachers can best use their individual talents, with students benefiting from the best that teachers have to offer.

Some astute observers of the present American educational scene take a lukewarm attitude toward the teaching team concept. Robert H. Anderson, for example, in his article, "Team Teaching," in the *NEA Journal* (March 1961) argues:

> "In many so-called 'team' enterprises, what actually exists is merely a voluntary federation of sovereign teachers enjoying a cooperative-collaborative relationship, but within which no one can be held accountable for performance of the program."

Professor Anderson of Harvard views the teaching team as a kind of

[1] For lively vignettes of team teaching see Arthur D. Morse's *Schools of Tomorrow—TODAY!* Commissioned and published in 1960 by the State Education Department of New York, Albany, New York.

organizational man, whose "modus operandi," is such that liability is vitiated by group action. This may be true where the team concept is poorly planned, but need not happen when the program is carefully planned. Team teaching is in its infancy, and there are many pitfalls which should and can be avoided. The Claremont Teaching Team Program, directed by the Claremont Graduate School, is the result of careful, judicious, long-range planning in teaching team construction. Note for example that the *Claremont Teaching Team Bulletin* (1961) definitely states: "The elected or appointed leader (team leader) of a faculty team assumes responsibility for the general performance of his team."

The conception of team in the Claremont Plan differs from that which guides most other team experiments in the United States. In the main, a Claremont Teaching Team is an instructional unit within a school. This unit is a combination of (1) a distinct student group; in secondary schools, 90-180 students who have chosen a similar program of courses would be a student team; and in the elementary schools, 150-200 pupils of particular ages or grades constitute a team. The plan also calls for a small faculty group (three to six teachers who have the same conference period each day) with complementary talents and specializations to be responsible both for the academic and counseling program of the student group, as well as for certain auxiliary personnel who assist in the instructional program. Block scheduling of team students and teachers permits variations in the length and sequence of classes. Such is the essence of the plan. When the scheme of organization is expanded to its utmost, a large high school of 2,000 students could conceivably be a cluster of fourteen teams covering the entire student body and faculty.

Team teaching will not solve all educational ills, nor should it be expected to do so. In the specific, this new idea could furnish an impetus to significant curriculum improvement. But it would be foolish to expect major gains in curriculum and instruction to result automatically from some simple rearrangement in school organization, and much remains to be done in training personnel for leadership roles and in devising efficient procedures for team operation. Under the Claremont Program, which includes nine school districts (Chaffey, Citrus, Claremont, Covina, Fullerton, Ontario, Palm Springs, Riverside, and Lowell, California), a special training program is provided in leadership and team procedures.[2]

Problems which call for immediate attention include finding time for adequate planning and evaluation, perfecting communication between teams, and exploring questions of cost, since teams usually require greater

[2] For a complete review of the Claremont Plan see: Nicholas C. Polos, "Progress in Teacher Education—The Claremont Plan," *The Journal of Teacher Education*, Sept. 1960, Vol. XI, No. 3, pp. 398-401.

quantities and different types of materials, library resources, and equipment than are to be found in most schools. Many basic problems of instruction, budget adequacy, and teacher preparation and competency still remain to be worked out. Though the teaching team concept alone cannot solve these problems, it does stimulate teachers' concern for them, and offers an alternate approach.

Since World War II every autumn has brought forth a new set of alarming statistics on the gap between teacher supply and demand. This dire shortage may be partly met by using the available pool of teachers more effectively and efficiently. The best argument for the team plan is that maximum use is made of the teacher's abilities. However, a "caveat," must enter here. The team teaching idea calls for a willingness on the part of the schools to discard the status quo of school organization: self-contained classrooms, egg-crate schoolhouses, and the hallowed ratios.

There is nothing sacred about the "old ways" of keeping school. James E. Allen, Jr., New York State Commissioner of Education, explains this well. In 1960 he wrote, "Never before in history have our schools engaged in such widespread experimentation to meet the new educational requirements. Never before have so many hopeful new approaches developed in such a relatively short period. . . . In the process we are learning that many of the old ways of operating our schools are not necessarily the best ways."

Team teaching is no substitute for hard work and certainly not a panacea for all educational ills. But the results obtained have clearly pointed us in a new direction and have directed us toward raising the quality of education. Instead of trying to meet the present emergency in orthodox ways, by clinging to external forms and old conventional methods, schools should recognize that a new alternative exists—the teaching team idea.

DO SOVIET SCHOOLS MINIMIZE ATHLETICS?

"Actually," says Dr. Lawrence Derthick, U.S. Commissioner of Education, "we found athletics to be one of the chief interests of the Soviet people. When we visited the superintendent of schools in Moscow, for example, we found his outer office filled with cups, trophies, and other awards earned in competitive athletics with the schools of other cities."

U.S. News & World Report, May 2, 1960

TEAM TEACHING IN BERKELEY'S BURBANK JUNIOR HIGH SCHOOL

BY DAVID O. MONTAGUE*

New ideas, new goals, and a vibrant enthusiasm to implement them have always been the means of providing a higher level of education for the student. The public schools too often depend on national groups for leadership in this age of "crash programs," so it is refreshing to see the classroom teachers, inspired by the administrative staff, providing the ideas and "know-how" for better public education.

This is being well demonstrated by the recent science team teaching organization instituted in the Burbank Junior High School in Berkeley, California. Berkeley has gained recognition for its early development of the junior high school plan and now its science team teaching plan continues to provide leadership in this area.

Burbank Junior High School is located in an intercultural area of Berkeley and is experiencing exaggerated problems with both remedial and accelerated groups. Recognizing this problem, the teachers of the science classes, encouraged by the Superintendent, C. H. Wennerberg, and Esmer Clark, Director of Secondary Education, decided to do what they could to provide better educational opportunities for their students. They formulated these objectives:

1. Increase the interest in science in the school
2. Raise student expectancies
3. Provide an opportunity for individual experiments
4. Improve the instruction of diverse groups

After hearing a joint lecture on team teaching from Dr. Delbert Lobb, Assistant Superintendent, Fremont High School District, Sunnyvale, California, and Mr. William K. Ramstead, Associate Director, Committee on

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Staff Utilization, Stanford University, it was decided that the best approach to the Burbank situation would be through team teaching.

The organization of the team consisted of four teachers, Melvin Cavanaugh, Levi Poe, Lowell Satterlee, and Mrs. Verla Clemens. The teachers were given direction by Anthony T. Rinaldi, who serves as a resource consultant for the group. The team also has a credentialed instructional assistant, Mrs. Nancy Rowe, who assists in grading examinations and papers, prepares instructional materials, supervises study groups, and assists in statistical work. Another help to the team is Miss Janet Tsukahira, who types lesson outlines for students, cuts stencils, duplicates necessary materials, makes tests and other written materials available to the teachers for daily use, and sets up apparatus.

One of the most exciting ideas being used in the team teaching experiment is the extensive use of the community resources. The highlight of this idea is the part being played by teacher aides in the team. Through the assistance of Mrs. Charlotte Treutlein, volunteer coordinator of teacher aides, students from the University of California have been enlisted to assist the teachers in their work. The aides are typically upper-division students studying sciences. They generally have worked with children before and must show a sincere interest in helping students. The aides assist the teachers by:

1. Setting up and taking down lab equipment
2. Assisting in grading tests
3. Participating in small group discussion under the direction of the teacher
4. Helping students on individual projects
5. Working with students who are falling behind
6. Reviewing students' notebooks and work
7. Assisting on field trips

The aides are also bringing valuable and recent ideas to the teachers from the University.

What makes many new and invigorating things possible is the scheduling being used in the plan. First, it is possible to have every seventh grader participate in large instructional groups of about 144 students so that slides, movies, talks, and demonstrations from outside sources can be presented. These classes are scheduled for Monday and Wednesday. On Tuesday, Thursday, and Friday it is possible to have supervised study groups of around 36 students or small groups of 18 for discussion, laboratory experiments, and work on individual projects. The aides provide immediate and first-hand assistance to these students.

In the large discussion groups, each member of the team is able to present and discuss that phase of science which is most familiar to him.

This provides for the group a teacher who is well prepared and enthusiastic about what he is teaching. This also gives the teacher a lift from the monotonous system of presenting the same lesson several times a day.

The most efficient part of the program, as far as learning is concerned, is when the students come together in the small discussion groups. This is where the student really takes hold. Here is where the accelerated group moves into areas which would otherwise be limited by a regular classroom situation. Also, this is the time when the slow learner can take time and have someone to give him personal assistance.

The creation of the team teaching plan at Burbank was also an enlightening experience. The teachers and Mr. Rinaldi spent a summer of valuable in-service training in developing the lesson plans, materials, and schedules. This also gave the teachers an opportunity to know more of each other and it created a harmony within the group which is being felt in their classroom work.

One of the basic parts of the plan is its evaluation. Through the help of Dr. Edna Thompson, School Psychologist of the Berkeley Schools, a comparison of the achievements of the seventh graders of the Burbank Junior High will be made with the seventh graders of two other junior high schools outside of the Berkeley district by pre-testing and post-testing. The teaching team itself is evaluating the teaching this year compared with the teaching before the team was organized. The teachers are noting the decline in discipline problems in the classes.

Progress is being made, but the plan is not all a "bed of roses." The school found it necessary to make considerable expenditures to equip the science department so that such an experiment could be handled. The team is finding that the auditorium where the large groups are meeting is ill-equipped, e.g., it makes no provision for students to write. It is also difficult for the teacher and the aides to move freely among the students to give assistance in the auditorium. The students are crowded and have difficulty handling their books. The resource room, where the team has its materials, is too far from the auditorium.

The team is finding that more time is needed for planning and evaluating. The one period together appears insufficient. They are also finding that a 40 minute period is too short to develop fully the concepts they are presenting or to complete the experiments they are preparing.

After a few short months of working with the team teaching organization in Burbank Junior High School it is felt that a great deal of progress is being made. Even though they may not reach their desired goals, the teachers are not afraid to attempt new and exciting things to better educate the students. They are assured of moral and material support of the superintendent and his staff in a team approach to classroom instruction.

CAN TEAM TEACHING AID LEARNING?

BY SCOTT D. THOMSON*

One of the fuzziest terms floating about educational circles today is that of "team teaching." By narrow definition, teaming involves no more than the cooperation of two or more teachers to instruct a single group of students. But most teachers who accept the advantages of team teaching ordinarily include from one to four *additional* elements of what is commonly called staff utilization. These are: (1) varying class size, (2) modifying period length, (3) using teacher aides, and (4) incorporating certain mechanical, electronic, and optical devices within the instructional framework.

A clear look at team teaching has been befogged by the rather dilatory mixing and matching of the above five factors, as if they were but color tubes in the local paint store. One experiment in better staff utilization may innovate with variable class size or with special machines. Another may include both differing period lengths and a two teacher team. A third may involve all elements of staff utilization as here defined. Little wonder then that the research reports are inconclusive and tend to confuse educators. Projects are often quite different in fact, though similarly titled.

When experimentation with team teaching is conducted, each element ought to be considered in the design. There should be a combining and recombining of these factors in a series of projects to determine which alliances best facilitate learning. Each element needs to be examined *within the total framework* for its effect upon the learning process. Progress has been made in determining the effect of one factor, group size. Research shows that students learn about the same kind and number of facts, concepts, and attitudes whether the class size is twenty-five, thirty-five, or even fifty.[1] Further such steps are necessary to create order from

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[1] Lloyd S. Michael, "New Directions to Quality Education in Secondary Schools," *The Bulletin*, National Association of Secondary School Principals, 45:13 (Jan. 1961).

chaos, to gain accurate definitions. To say that team teaching is effective or ineffective upon only fractional or shallow application of the variables is really not to say much.

A second point to consider is that the above five elements are primarily administrative or organizational-type factors, which by themselves do not guarantee an improved learning situation. Alone, they can provide at best only the veneer of a better learning environment. Until we move on to investigate what learning principles (if any) are facilitated by the new design, rather than expecting the design to have a panacean effect *per se*, then outcomes will continue to bewilder. We cannot accomplish our purposes in education by restructuring alone. Lowering the bars of rigidity does not automatically cause innovators to step forth; in fact leprechauns might.

The basic question, then, should not be "Can students learn under this new plan?" The critical queries are these: "What new syntheses of learning principles with learning environment does the utilization plan allow?" "What new leverage does this concept give the teacher at the grass roots level for inspirational teaching?" "What barriers to learning have we removed which were inherent in the traditional school situation?"

Under the above definition team teaching is more accurately defined in terms of function than as a fact of organization. The hypothesis for team teaching is that staff utilization produces better learning situations than do teachers working singly in traditionally organized classes. And a true team relationship occurs only when a group of teachers and students, as an organizational unit, *accept and carry out* the responsibility for certain instructional variables such as time, space, group size, group composition, method, human and material resource allocation, and task specialization so as to cause better learning by synthesizing principle and practice. This definition is based upon the assumption that one of the major functions of teaching is the control and direction of the necessary and sufficient variables that form or directly influence the teaching-learning process.

Analysis of Research

Most articles presently available on team teaching omit statistical results and merely mention that "research data appear inconclusive as to student achievement." Evidently some experimental classes achieve better than control groups and others do not.

The entire January 1960 and 1961 issues of the Secondary Principals' *Bulletin* are devoted to analyses of staff utilization projects. These periodicals describe the results of over twenty experiments conducted across the nation, and they constitute the primary source of empirical data on

the subject. Many specific evaluations are subjective, opinion-type efforts complimentary to team teaching. The following quotation is typical:[2]

> Probably the most significant conclusion which might be drawn is that the operation during the first two years had been successful is evidenced by the fact that students expressed a desire to continue with this type instruction, teacher aides indicated regret in the necessity to leave the program, teacher-team members and leaders indicated the desire to continue in the program, and other teachers on the staff were interested in participating in teams next year.

Certain experimenters do project a measure of true inquiry into their efforts. Two Districts, Jefferson County, Colorado,[3] and San Diego, California,[4] have conducted creditable staff utilization programs to include adequate research activity. The conclusions from both projects tend to be similar; attitudes of both students and teachers were positive toward staff utilization, but achievement tests initially were inconclusive. Nor did patterns develop as to subject. In one case an experimental biology class would achieve superior results, in another instance only experimental social studies or English classes learned more than the control groups.

The Jefferson experiment was conducted in three phases, each lasting a year. The first year consisted primarily of an analysis of class-size as related to learning, but the second and third year programs incorporated teaching teams, machine assistance, teacher aides, and schedule modification as well. Test results the first two years were inconclusive. However in the third year achievement results favorable to team teaching and schedule modification appeared. "This was taken to mean that, as the new patterns became familiar and as we learned to utilize them more effectively, greater and greater advantages would accrue to the educational opportunities for students."[5] What happened, perhaps, is that certain teachers under the staff utilization plan began to break old teaching habits stamped by tradition, and began to experiment with their new freedom and to teach better. Possibly some teachers stumbled onto new refinements of theory and classroom practice. New instructional models became born, some unconsciously.

[2] L. I. Bloomenshine and T. M. Brown, "San Diego, California, Conducts Two Year Experiment with Team Teaching," *The Bulletin*, National Association of Secondary School Principals, 45:157 (January 1961).

[3] R. H. Johnson and M. D. Lobb, "Jefferson County, Colorado, Completes Three Year Study of Staffing, Changing Class Size, Programming, and Scheduling," *The Bulletin*, National Association of Secondary School Principals, 45:57-78 (Jan. 1961).

[4] L. I. Bloomenshine and T. M. Brown, *op. cit.*, pp. 147-166.

[5] R. H. Johnson and M. D. Lobb, *op. cit.*, p. 73.

Harold Taylor of Claremont Graduate School believes that critics should not be too hasty or severe of opinion as they question team teaching. He states: "Before researchers attempt to evaluate a particular program, the program must be given a chance to establish itself. . . . Definitely a maturation process must take place before a program can be considered to have reached a point where evaluation is profitable."[6]

Factors of Learning Aided by Team Teaching

Team teaching assumes that one of the major functions of teaching is the control and direction of variables that form or directly influence the teaching-learning process. While psychology is still in the process of searching for and describing the variables which account for learning, Kingsley differentiates these variables by placing them under three headings: variables associated with the individual (maturation, readiness, etc.), variables associated with the task to be performed (meaningfulness, difficulty, etc.), and environmental variables (frequency of response, strength of stimulus, knowledge of results, incentives, etc.).[7] The third area as defined by Kingsley, that of environment, includes those learning variables potentially most affected by a staff utilization organization. With these specifically in mind, let us explore the possibilities for developing learning models which allow a better application of learning theory to instructional practice than do traditional classrooms of today.

A teamed faculty should be capable of more skillfully applying the following factors of learning to the instructional process:

1. Set: At present, teachers need almost every day to establish sets for their students. Teachers are burdened unduly because their many and varying roles must be established at the beginning of each period. Perhaps on Monday the teacher lectures, expecting close attention. The next day he participates in group or panel work and carries a different role. All such activity takes place within one room and with a given number of students. The weight of continually re-casting student sets not only bears upon learning, it bears upon discipline—or lack of it. If students expect a lecture on day "X," and discussion periods are held instead, for instance, a behavioral reaction may set in. When Miss Jones says that "Mr. Jackson is a wonderful teacher but I couldn't teach the way he does," she is approaching the truth more than she realizes. Miss Jones couldn't teach that way because the students are not used to being taught that way *in her class*. They would ordinarily react and cause problems if she attempted to teach like Mr. Jackson.

[6] H. F. Olds, *Survey of a Meeting on Team Teaching* (minutes), Committee on Team Teaching, Chicago 1960, p. 2.

[7] Howard L. Kingsley and Ralph Garry, *The Nature and Conditions of Learning*, Prentice-Hall, 1957, pp. 15-16.

Under a team arrangement expectations are quite clear. In large groups there will be presentations, films, guest speakers, panel discussions. All students entering a large group carry this set in mind; the task is to listen, and to take notes for future reference. Discussion is neither expected nor condoned. Discipline in large groups generally is excellent. Perhaps the true disciplinarian in this case is set.

In small group discussion the importance of set once again enters. Students know they are expected to participate; not just enough to fill in the empty spaces in the lecture, but they are expected to participate fully. They come prepared with that in mind. In laboratories other expectations arise and are honored, as eventually they may for individual programmed learning stations. Thus a teacher need not be Dr. Jekyl and Mr. Hyde to students as he guides them from function to function. In the past, such character changes have almost been a necessity of the job. Student behavior is now carefully defined because the differing expectations are honored in well understood arenas of time and space.

Perhaps in learning, more than in discipline, is set facilitated by the team approach. Research shows set to be an important element of transfer, and of accuracy and speed of perception. It also aids accurate problem solving.[8] Furthermore, attitudes are important determinants of learning, and the immediate classroom environment, if stimulating, "sets" the student towards working.

Also, it has been found that those students given relevant and clear directions learn more than students who must determine their own rules. Team teaching improves upon the learning situation by giving teachers more time to plan, to think clearly, and then to give these instructions with the aid of carefully prepared visual illustrations.

Memory processes are strongly influenced by set, as is perception. Specific instructions, hints and advance verbal preparation facilitate perceptual organization. If teachers instruct fifteen to twenty hours a week as proposed, rather than the present twenty-five hours, then illustrations can be developed which increase learning.

2. Curiosity and Attention: Vinacke lists the determinants of attention as (a) Intensity, quality, suddenness, and novelty of stimulus, (b) Movement, (c) Repetition of stimulus, and (d) Congruity of intruding stimulus with present content of consciousness.[9] Team teaching could especially facilitate the intensity, novelty, quality, and suddenness of stimuli. Teams have the capability of utilizing every variety of teaching resource known. Printed, visual, audio, machine, mock-up, human, and natural resources all take on new dimensions under a team organization.

[8] W. Edgar Vinacke, *The Psychology of Thinking*, McGraw-Hill Book Co., 1957, p. 314.

[9] Vinacke, *op. cit.*, p. 29.

Team members can specialize and thus become intense stimulus sources, radiating a new quality of information and enthusiasm. The novelty of changing instructors from time to time also increases student attention. Stimulation can be further enhanced by inviting prominent citizens to discuss certain issues; citizens whose schedules are so full they can agree to meet only with large groups of students. These speakers lend enhanced prestige to the topic at hand as well as reinforcement when the student later reads about this person in a newspaper or else meets him on the street.

Robert Ohm believes that when the comparative and absolute advantages of technical devices in teaching are fully exploited, students will be responsible for a larger share of their instruction than at present. He sees this as a stimulus factor to student learning—that is, an appropriate stimulus will be provided for each student. He argues that only the instructional team possesses the necessary task, group, and schedule flexibility; and the proper authority, information and experience to co-opt the full potential of technology in education.[10]

One should take full advantage of the motivating force of a child's curiosity. Perhaps motivation research has too much emphasized the basic drive factors and too little explored the power of curiosity to move people. A teaching team which imaginatively uses the variety of personnel and equipment available to it can continually keep student interest peaked. The teacher working alone cannot pretend to match a team's potential in this matter.

Those who fear for the child's security because of large group instruction, or because the student must work with a number of teachers, should become aware that a certain amount of tension facilitates learning.

3. Reinforcement: Many psychologists argue that immediate reinforcement is a requirement of learning. Some critics may see in team teaching a weakness here, if for instance, there is a time gap between large group presentations and small group discussion. Perhaps this is a structural defect. However, in the large group, note-taking may of itself be a reward, as might be asking students to write down questions for future discussion. Appropriate Socratic questioning by the instructor can also reinforce learning.

The small discussion groups can provide direct experience with immediate reinforcement. Participation, commitment, emotion—these are well known clarifiers and reinforcers of concepts. Ordinary classroom situations allow far too little of this type of activity.

Information, when irrelevant to the topic at hand as far as a particular individual is concerned, impedes learning. Thus, much so-called "discus-

[10] Robert E. Ohm, "Toward a Rationale for Team Teaching," *Administrators Notebook*, Volume IX, 7:3, (March 1961).

sion" in a classroom of thirty students, only five or six of whom are participating, may actually impede concept formation for many students if this discussion hits only at the special interests of the minority of discussants. Under the team concept, small groups can be formed by selecting students with common interests in the topic under consideration.

Another important factor in learning is knowledge of results. In seminars, where all participate, students receive immediate cues as to how their opinions are considered by others. When coupled with the empirical fact that recitation increases learning, this should force schoolmen into creating educational models where such activity is as automatic to the situation as possible.

4. Additional Factors: Team teaching possesses the potential to enhance the learning process in many additional ways: by stimulating imagination and creativity, by more skillfully individualizing learning, by deepening the accuracy of subject content, by building more carefully for generalizations and relationships. Perhaps the child can even learn more by imitation than is now possible. As teachers become both more knowledgeable and attractive through task specialization and other facets of teaming, as they gain increased time for preparation and research, as roles become clarified, then teachers may become truly influential with adolescents. Youth possibly will find more idols behind a book, and fewer behind a six-shooter. Such allegiances are important, and they definitely affect learning.

A Rationale for Team Teaching

Urgent need exists for more information about learning under school conditions. A few standard reference experiments provide the basis for most of our knowledge about the fundamentals of learning. Thorndike's cat experiments on simple escape learning, Pavlov's classical conditioning study, Kohler's work with chimps, and some T maze experimentation on motivation and reward appear to be the basics. While the psychology of learning may be in relationship to education more as physiology is to medicine, rather than as medicine is to the patient, such data do give valuable hints as to the nature of classroom learning.

There now exists a great need for more experiments performed with the specific purpose of finding out whether certain implications from learning theory lead to improvement of learning in a school setting. The psychology of learning has been applied successfully to some aspects of military training. Perhaps contemporary pressures are now strong enough to convert certain of our schools into practicable learning laboratories, staffed with thoughtful classroom teachers. Team teaching, with its direct command of the necessary variables, provides the most workable model yet devised for this purpose. If we are willing to avail ourselves of the opportunities at hand, team teaching can aid learning.

AN EXPERIMENT IN LARGE GROUP INSTRUCTION

BY JOHN T. WARBURTON*

When the educational history of the 1960's is finally written, one of the major observations will be the movement away from traditional class size in the American high school. The increasing public demand for excellence in education has initiated a prolonged look at the present methods of organizing for instruction, as well as at the content of the curriculum. The vast break-through in the electronic field has provided education with new tools which make groups of various sizes not only a possibility but a reality.

The heavily endowed philanthropic corporations and the Federal government both have contributed money toward well controlled experimentation in varied class sizes. However, most of the money was spent on gadgetry and not on basic experimentation designed to determine the relative teaching effectiveness in different size groups. In spite of a great emphasis placed on these new horizons in education through the Trump report and other equally important studies, a thorough search of the literature revealed a paucity of articles dealing with experiments designed to show the optimum size of classes for teaching.

The Grossmont Union High School District Board of Education authorized the Department of Instruction to proceed with large group experimentation during the school year 1959-60. The purpose of the experimentation as outlined by the Board was to determine whether groups of 100 or more students in a class could achieve as effectively as a group of 30 to 35 students.

The experimental design provided for the establishment of two classes in 12th grade English in two different high schools in the school district.

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Two teachers of closely matched background and teaching effectiveness were selected to teach these classes. One of the teachers was assigned a group of 125 students, while the second teacher was assigned a traditional class of 35 students. The teacher with 125 students was given, in addition, 30 hours of reader time per week. The 125 students were scheduled with the teacher for five days a week. However, the class was broken down in many different ways. For a part of the time the reader helped with small group instruction aiding students who had specialized problems either in usage, grammar, literature, or composition. In addition the teacher was available approximately two hours per day for office hours where the youngsters could come either during their lunch period, study hall, or before school.

The teacher chosen to instruct the traditional size class taught five periods a day, five days a week. The teacher of the large group handled one lecture section, one senior honors section, and one regular size senior English section. Because the teacher of the large lecture section carried more than his normal load in three classes, it was possible not only to release him for two hours each day but to provide him with thirty hours of reader time per week.

The curriculum for the two classes was basically the same. An identical composition and grammar book was used, and the same policy regarding the one composition requirement per week was instituted in both classes. There was some difference in the kinds of literature which the students read, but in both cases it was English literature of the 19th and 20th centuries.

The students in both classes were given a battery of Gulick Vocabulary and SCAT-STEP tests before the class started in the fall and at the conclusion of the academic year. In addition the students were asked to write an essay at the beginning of the class and at the end. The basic measures used to evaluate the effects of the two kinds of grouping, the large group and the medium sized group, were the Reading, Writing, and Listening sections of the Sequential Tests of Educational Progress (STEP). The STEP tests focus on skill in solving new problems on the basis of information learned rather than on ability to handle only lesson material.

The STEP Reading test assesses

1. The ability to reproduce ideas
2. The ability to translate ideas and make inferences
3. The ability to analyze presentation
4. The ability to criticize

The STEP Writing test includes items which fall into five categories:

1. Organization
2. Conventions and punctuation
3. Critical thinking
4. Effectiveness
5. Appropriateness

The Listening tests were designed to measure skills in understanding, interpreting, applying, and evaluating the student listening. Each Listening test includes material of each of the following types:

1. Direction and simple explanation
2. Exposition
3. Narration
4. Argument and persuasion
5. Aesthetic material, both poetry and prose

In the fall of 1959 the large English group at one of the schools, hereinafter termed the experimental group, and the control class at the other high school were given the STEP tests. The difference in means between the two groups was 4.2 points. This is a significance well beyond the .001 level.

The results of the second testing, Spring 1960, in the Reading area showed that the experimental group exceeded the control by 8.9 points. This again represents a superior and highly significant difference.

In all three areas of Reading, Writing, and Listening the experimental group gained over the average size group. The gain in Reading was 1.9 points; the gain in Listening 3.4 points; the gain in Writing 7.8 points. This, of course, was the most significant gain, and was not expected as normal growth. We would conclude that the large group was superior to the average size group in all areas. In those skills which we traditionally feel are best taught in smaller classes, composition and reading, the large group was much superior.

EXPERIMENTATION AT VERDUGO HILLS HIGH SCHOOL

BY GJERTRUD SMITH*

Most high school administrators these days are searching for a two-way-stretch curriculum into which they can crowd all of the subject content necessary to build a comprehensive and firm foundation for future learnings for their students. The knowledge explosion of our era is forcing changes in the traditional high school pattern, and the fantastically rapid evolution of new ideas which must become spotlights in the high school student's realm of awareness demands a fluid, continuously adjustable curriculum.

Educators are pressured by demands to increase the amount of instruction in science, mathematics, English, foreign languages, art, health education, family life education, etc. Along with these demands come others for the introduction of new courses in economics, geo-politics, business practices, Russian, Swahili, and you-name-it. At the same time, there are groups who serve as watch-dogs of tradition and who resist any de-emphasis of the Boston Latin School plan, their theory being that "What was good for my grandfather is good for my son."

One obvious solution to this dilemma, of course, is to lengthen the school day, the school week, and the school year; but opposition to these plans is vigorous. The parents resist on the plea that there are other learnings important to the child for which time is needed (private music lessons, home chores, work experience, travel); the teachers shudder and point out that six hours of instruction a day, plus two hours of homework are about all most students can absorb, and five days a week is all that teachers can endure. For practical purposes, the expansion of the summer school program has lengthened the school year for students who wish this opportunity, but a year-round school for all students presents many

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problems, primarily the one of correlating school vacations with papa's vacation.

A more flexible schedule is now recognized as one way of providing for the multiplicity of needs of students. All subjects do not require equal time to accomplish their basic purposes and, therefore, the split-week and split-semester courses provide ways of introducing more experiences and more remedial or brush-up work for students. Verdugo Hills High School has pioneered in this field in Los Angeles, and as a result of the success its teachers have had in this experiment, other high schools will soon be following suit. Split-week classes are not entirely an innovation in education; many schools in other sections of the country have courses which meet only two or three days a week when coupled with a study hall (Los Angeles had this plan in the 1920's). The combining of *two* courses within the same period is a little different, however, and gives students the opportunity to include more electives in their programs.

Split-Week Courses

Split-week courses were developed at Verdugo on an experimental basis in an attempt to make the program more flexible, to allow for more electives, and to see if some courses could be taught effectively if scheduled only two or three days a week. Teacher-experimenters had to build courses of study, sometimes from scratch, and considered their classrooms as laboratories. Units were tried, amended, rejected, expanded, blended according to student reaction and the results obtained.

Courses were paired according to what was hoped would be of maximum benefit to students. In some cases, students failed to see the advantage! As the experiments developed, it became apparent that some courses were successful while others were not. In almost each experiment there were difficulties; but since there are very few problemless classes in school, teachers were not thrown by the rough spots. Some advantages and some disadvantages appeared to be common for most of the experiments and were not specifically related to the subject involved. These are briefly stated below:

Disadvantages of Split-Week Schedule

1. Split-week programs sometimes mean an increased work load for the teacher. Theoretically this should not happen, because the teacher should be making a preparation for each class each day. In practice, however, the teacher does not require the written work from a single class that he must get from two sections of a split-week, and he does have to keep a double set of records.
2. Non-achievers and discipline cases tend to take advantage of the alternate day schedule: cutting classes, "forgetting" to bring materials,

"forgetting" what transpired at last session which "was so long ago," failing to do homework because teacher isn't breathing down their necks the next day, and playing one teacher against the other.

3. In those classes which normally meet five days a week, the teacher sometimes has trouble streamlining content to fit the shortened schedule.
4. Homework loads are sometimes not balanced, and students get a double dose.
5. If partner courses are too closely related, students become confused and teachers may infringe on each other's territory. If partner courses are too divergent, students and teachers have trouble establishing an interrelationship of subject matter.
6. The present plan of set partner courses which requires the student to take subject B if he wants A, etc., created some feelings of resentment and discontent.
7. Most split-weeks are ungraded (problem of a small school), and this makes for problems in establishing performance norms and subsequently of marking standards.

Advantages of Split-Week Schedule

1. The smaller high school can offer more electives.
2. Students with heavy majors and many requirements can include more elective experiences.
3. Student interest is more easily sustained. Students like variety which schedule provides: change of teachers, change of subject, change of pace. Good antidote for restlessness.
4. Adaptability of schedule and mobility of program provide opportunity for non-achievers to find themselves and to fill in voids.
5. Drill and remedial subjects are more digestible than on usual diet.
6. Attendance records of many students are improved.
7. Report card marking tends to be more objective as two teachers confer and judge on the basis of two observations.
8. Class preparation is actually less in some cases since teacher meets each class half the usual number of days and can prepare once for two classes.
9. More responsibility is placed on students; less spoon-feeding in matters of assignments, due dates, etc., is provided by teachers.
10. In comparison with ten-week classes, split-week schedules provide time span for more secure learning and the development of depth in appreciation.
11. There is preparation for students who will be attending college in orienting them to meet college routines and schedules.

Recommendations

1. Many split-week courses have value, particularly in a small high school, and should be offered in the program.
2. To provide for greater opportunity of choice, several split-week courses should be offered the same period, and students should be allowed to select the partner courses he prefers. Verdugo is planning to do this next semester.
3. Although it is not possible to eliminate from split-week courses all discipline cases, the distribution should be checked to avoid enrolling too many in one class.
4. Attendance procedures must be meticulously followed to prevent cutting.
5. Where possible, split-week classes should be restricted to certain grade levels or at least scheduled for "upper division" or "lower division."

Split-Week Courses

The split-week courses at Verdugo for one semester have been:

English Skills—A brush-up course for A-11 academic students who need special preparation for Advanced Composition.

Library Research Skills—Intensive training in use of library resources. Intended for college-bound students.

Speech—Training in public speaking. Open to all students.

Creative Writing—Open to all students who qualify in written English.

Business Practices—Intended for 12th graders who plan to enter industry or business upon graduation. Units on money, credit, insurance, investments.

Personal Typing—Open to all students who want to be able to type term papers, personal letters.

Record Keeping—Open to all upper division students. Covers use of and theory behind business forms used in handling money, pay checks, and tax records. Family budgets, organization records, individual insurance, and tax problems are also discussed.

Mathematics Skills—A brush-up course for seniors who failed to score above the 75th percentile on the A-11 Mathematics Test but who did score above the 50th percentile.

Laboratory Techniques—A prerequisite for students who plan to take physics or chemistry. Instruction in terminology and semantics of science, mathematics of science, nature and use of scientific equipment, and basic principles of laboratory research.

World of Art—Intended for students who assume they have no art aptitude but who need an art experience.

Music Listening—Intended primarily for students who have no interest in or training for performing groups in music. Attempts to develop an

appreciation of music which will serve the average consumer.
Drama—Intended for students who want to experiment with this sort of thing but cannot afford a full class in drama in their schedule.
Journalism—Intended for beginners who want to sample this area.

Experiment on Team Teaching

In September, 1960, Sol Wymar and Peter Tanas initiated an experiment in team teaching with the Contemporary American Problems class in which were enrolled all the Senior Ayes, about 100 students. Aside from their interest in the possibilities of team teaching as a means of providing for more flexible scheduling, Mr. Wymar and Mr. Tanas were concerned with better preparing seniors for post-school activities. Many of the seniors would be attending college while others would be going to work, and the teachers knew that these students had received little experience in listening to lectures or lengthy instructions, had had almost no direction in note-taking, had had no weaning from the close supervision and guidance which senior high school students receive. Furthermore, these men realized that their respective backgrounds and training had made them specialists in different fields and that there would be advantage to seniors to be taught by both teachers. The first semester experiment was a success in the opinion of both teachers and students. It was decided, therefore, to continue the experiment with the current A-12 class. This being a large group, three classes and three teams were required. In order to cover the assignments efficiently, each of the original experimenters took on a new one for his team partner.

In the evaluation just completed by the current teams, it developed that there is not unanimous approval of the plan of team teaching. Two of the teachers who tried the program for the first time this semester have concluded that team teaching is not an efficacious system and that the disadvantages far outweigh the advantages. The other three teachers, while admitting that there are some negative aspects to the plan, still recommend the use of team teaching for seniors and consider that the positive results have greater weight. In brief, the disadvantages and advantages as identified by the experimenters follow:

Disadvantages

1. The close teacher-pupil relationship of the usual classroom is lost.
2. Student participation through discussion is minimized. Even when the class is divided for discussion, the groups are larger than usual and full participation is difficult. Students lose the benefit of give and take.
3. In the opinion of two of the teachers, students do not learn through this lecture method, because they don't listen and teachers cannot effectively check on what they are absorbing.

philosophy, work patterns, and personalities. They must articulate well, and they should be assigned the same conference period in order that they may plan together.

2. Better provision should be made to allow for frequent group discussions. The pupil-teacher ratio should be low enough to permit a maximum of 40 in each discussion section.
3. The mechanics of record keeping should be streamlined to allow for rapid and accurate recording.
4. Chronic off-beats in the class should be identified as soon as possible and invited to confer with the vice-principal. If this does not mature the senior, permanent exclusion will.
5. Members of this graduating class should be canvassed next spring when they have been in college or on the job a year to determine what benefits, if any, they see in having had team teaching.

N.B. It should be noted that Verdugo's team teaching is the poor school's variety. In other parts of the country where this has been tried, the team was assisted by teacher aides who helped with roll-taking, grading of papers, and other duties. Furthermore, in most schools team teaching is used only for brief periods in the semester. Our teams had no aides and carried the program for a full term.

Personnel Problems

From the viewpoint of the administrator, it is obvious that a careful selection of teachers is important to the success of any program, and particularly in the case of experimental and off-beat schedules.

By far the great percentage of teachers welcomed and enjoyed the opportunity to be creative, to try some pet ideas, to spread their professional wings. These teachers had very little difficulty with controls, attendance accounting, and homework schedules. Some of these teacher-experimenters had been in a rut, but this opportunity gave them a new lease on life and almost a rebirth professionally.

Teachers who have ossified in their jobs cannot adjust to *any* change, experimental or otherwise. They become highly disturbed and confused if they are required to deviate at all from their accustomed pattern of teaching. This is not a question of age but rather of personality, and such teachers must be left in their cocoons in order to get maximum service from them.

Teachers who for years have followed the paths of least resistance, whose work day, if such it truly can be called, begins with the tardy bell to Period I and concludes with the dismissal bell for Period VI, will criticize and fight against any experimental program. Such classes require a full measure of work from the teacher and place him in the spotlight where others know whether or not he is producing.

4. Since the more academically able students are skimmed off into International Relations, the ability level of the group is not high and stimulating sparkle is lost.
5. Non-achievers, non-conformists, and reluctant learners tend to take advantage of the large size to cut class, to catch up on sleep, to crystallize social relationships and to create disruption.
6. The increase in the teacher-pupil ratio, the complexities of attendance recording, and the large amount of paper work places a heavy burden on the teachers. This is particularly true in Period II, which is the official homeroom period.
7. Lecturing before a large group of students takes extensive preparation and energy, which adds to the teachers' burden.
8. When the teacher partners have opposing educational philosophies and different work patterns, it is not possible to develop team work. Teachers are then placed in a competitive position.

Advantages

1. Since two teachers lecture in the field of their academic specialties, students receive a wealth of information and orientation not possible in usual class structure.
2. Inasmuch as college classes, on-the-job briefings, and civic meetings place a great deal of responsibility on the individual for obtaining the information being given, this class in team teaching is a good training ground and transition for college, job, and civic responsibility. Practice in how to listen and in note-taking is part of this preparation.
3. The enthusiasm of most students for the team teaching structure is high; interest and attention are acute and the feeling of being an adult permeates the group with dignity.
4. The increase in the teacher-pupil ratio allows for additional teacher time to be used for small advanced classes in languages, etc.—a problem in a small school.
5. Team teaching places the teacher in a different professional environment; he learns from his partner and teaches him too. The private domain of his classroom disappears, and he is involved in a dynamic learning situation reminiscent of the college classroom.

Recommendations

It has been decided not to do team teaching in Contemporary American Problems next semester in order to allow teachers to work in the usual class structure and to establish again a point of reference for evaluating student achievement. An experiment in team teaching with World Geography classes will be tried instead. The following recommendations were made:

1. Teacher partners must be highly compatible in terms of educational

Some teachers, enthusiastic about the program, need close supervision to make sure they provide a firm core of instruction and not too much froth.

As is true in most studies, many people assisted in these experiments in a behind-the-scenes role. Instructional Services and Secondary Education supervisors generously gave their time in previewing the plans and in helping teachers to obtain textbooks and equipment they needed; the Research and Guidance Section and the Budget Division went crazy trying to figure out our annual report; counselors and department chairmen struggled with the problems of selling, programming, and scheduling; vice-principals and department chairmen provided objective reactions to guide teachers in the development of their courses; other members of the faculty served as sounding boards for student reactions and wailing walls for the experimenters when the going was rough. These experiments have required a lot of typing, dittoing, mimeographing of courses of study, work sheets, and reports, which loaded Office Practice students and professional clerks.

From my vantage point as school administrator, Operation Experiment has been an all-school project, and it has been an excellent demonstration of the professional pioneering spirit which lies fallow within every conscientious teacher. A school program is just as good as its teachers are capable, industrious, and creative. It cannot be better. We are proud to have a good school.

DROP IN GRAD STUDENTS CITED BY PHI DELTA KAPPA

The number of graduate students pursuing the doctorate degree in education has dropped more that 23 per cent in the past year, according to a survey made by Phi Delta Kappa.

Maynard Bemis, executive secretary of the fraternity, explains, "Two years ago there were 1,976 dissertations under way at 91 U.S. and Canadian institutions cooperating with Phi Delta Kappa in the publication of *Research Studies in Education*. Last year this number dropped to 1,516, despite the fact that 14 more institutions cooperated in preparing the list."

Mr. Bemis believes that education is losing graduate students to other fields in which there are more generous grants and fellowships.

A recent study by the U.S. Office of Education showed that 139 doctorate-granting institutions awarded graduate fellowships totaling more than 35 million dollars. More than 40 per cent of this went to mathematics, engineering, and the physical sciences. Only five per cent went to education.

Mr. Bemis states that this disparity is grossly unfair to education graduate students who account for more than 30 per cent of all graduate students in the U.S.

Dean of the Graduate School of Education at the University of Chicago, Francis S. Chase, points out that there may not be enough "bite" in some institutions' education courses to attract students of high quality.

—"College and University," AHE *Bulletin*, October, 1961

AN APPRAISAL OF TEAM TEACHING

BY ARVEL B. CLARK*

Team teaching is a relatively new teaching technique developed for the improvement of instruction. It is based upon the concept that one of the most important factors contributing to improved instruction is preparation; team teaching is a means used to provide more preparation time for teachers. This is accomplished in three ways. (1) An extra preparation period is allowed a team of teachers. (2) Clerical assistance is furnished to relieve the teachers of certain tasks. (3) Larger groups are utilized to compensate for the extra preparation periods.

Unfortunately, team teaching is coming to be identified more and more with large group instruction. Indeed, certain educators have come to the conclusion that it has developed into a device whereby large groups of pupils are assembled to hear daily lectures, and that those pupils involved in team teaching programs are missing the benefits of small group and individual participation. Unfortunately, many of the teachers involved in team teaching are demonstrating that this is the case and have done nothing to dispel the notion.

If we are to preserve the advantages inherent in team teaching then we must examine the factors that have contributed to the present situation, re-establish our orientation on the basis of known techniques, and progress from there. Team teaching and large group instruction as a synonymous term has come about due to the following circumstance: when teachers first embarked upon the project of team teaching it was assumed that the large group would be the basic unit of instruction. The means whereby the purposes of team teaching are implemented, utilizing large groups to compensate for the extra preparation period, would seem to validate this assumption. But this basic assumption is fundamentally unsound because it has created a situation which fosters an activity which we are trying to limit in the first place—the large lecture class.

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What is the function of the large group? The large group serves as an excellent means to supply information, introduce topics, show films and administer tests. But the large group must not become an end in itself. Lecturing, the bedfellow of the large group, must not become the only method used in the teaching-learning situation. Instead, the large group must be used to satisfy only those activities that best lend themselves to that type of instruction. If the large group is the basic unit it fosters an overabundance of those activities cited above and tends to lessen the opportunities for pupils to apply the information they gained in the large group, to utilize their individual resources, as well as receive adequate individual attention and assistance.

The basic instructional unit must be reconsidered. This teacher feels that the basic unit should continue to be the regular size group of 25 to 30 and that the large group must be used for the purpose it serves best, that of supplying information. Diagram "B" below, demonstrates a team teaching schedule for two teachers working under this proposal. The basic unit of instruction would be regular size groups. Such a structure will allow the pupils to utilize certain important educational processes readily, such as the application of information gained in the large group and teacher guidance and assistance on a more personal basis. And most important, the large group will be used only when it is needed.

It will be noticed in Chart "B" that the teachers in this team teaching project would, through fiscal necessity, be responsible for five sections of 25 to 30 students each. The problem that presents itself under the proposed structure is one of determining how an important purpose of team teaching, providing extra time for teacher preparation, can be gained if each teacher has the responsibility for five classes. First, those engaged in the team should have the same preparation period. This will allow for the coordination which will be necessary with a team. There will also be more preparation time for the teachers due to the large group. In Chart "D," for example, it is shown how preparation time is increased by using three teachers in the team. The same would hold true by utilizing two teachers. In Chart "D" the teacher of Section I would have his regular preparation on each day, plus 4 more during the week by having the 4 extra hours on Friday. The teacher of Section II would also have 4 more preparations by having 4 extra hours to prepare on Monday. The teacher in Section III would have 8 more preparation hours during this particular week by virtue of not having any large group responsibilities on Monday and Friday. The extra preparation time would average out to approximately 100 per cent more over a period of a year, using one period preparation per day as the basis. The large group responsibilities could be assigned on an alternate basis so that the extra preparation periods could be equally divided. Under this structure, the large group

A—A Typical Schedule for a Team of Two Teachers

Period	1	2	3	4	5	6
	Prep	Prep	75 pupils same subject	75 pupils same subject	75 pupils same subject	75 pupils same subject

B—Proposed Reemphasis Using a Team of Two Teachers

Period	1	2	3	4	5	6
	Prep	25 I pupils	25 I pupils	25 I pupils	25 I pupils	1 sect. another subject
	Prep	25 II pupils	25 II pupils	25 II pupils	25 II pupils	1 sect. another subject

C—Proposed Reemphasis Using a Team of Three Teachers

Period	1	2	3	4	5	6
	Prep	25 I pupils	25 I pupils	25 I pupils	25 I pupils	another subject
	Prep	25 II pupils	25 II pupils	25 II pupils	25 II pupils	another subject
	Prep	25 III pupils	25 III pupils	25 III pupils	25 III pupils	another subject

D—Responsibilities for a Team of Three Teachers

Mon. (Lge Group)	Tues. (Sml Groups)	Wed. (Sml Groups)	Thurs. (Sml Groups)	Fri. (Lge Group)
Sects *I, II, III	Sect I 25 Library	Sect I 25 Sml Group	Sect I 25 Individual	Sects I, *II, III
Intro Unit Lecture	Sect II 25 Individual	Sect II 25 Library	Sect II 25 Sml Group	Lecture Film
Film 75	Sect III 25 Sml Group	Sect. III 25 Individual	Sect III 25 Library	Examination 75

* Large group responsibility.

would be serving the function it is supposed to serve while still satisfying a purpose of team teaching by increasing preparation time approximately 100 per cent over the year.

Another factor which must be considered with preparation is summer workshops. If these are provided for the team of teachers, a good deal of the normal preparation can be completed. The team can develop objectives and activities for their project, as well as schedule large group responsibilities, reserve the library, order films, develop study guides and reading lists, run off instructional materials, develop individual projects and do research for lectures. All of the summer preparation can be enhanced if the people involved in the team have the same preparation period during the school year.

One measure of the effectiveness of any program is its facility for utilizing proven learning techniques, incorporating new techniques, and rejecting or utilizing to the minimum those teaching techniques which do not result in the greatest learning. Team teaching is not an end in itself. It has definite qualities which seem to indicate that it can be a successful teaching device. And the purposes of team teaching can be served while still retaining the small group as a basic unit of instruction. By retaining the small group as basic we will provide situations to foster the types of learning activities which will allow for greater pupil application and greater use of individual resources as well as provide for a closer pupil-teacher relationship.

EDUCATION'S GREATEST NEED

As we follow the debate over our educational system, that system's greatest need becomes increasingly clear. It is not money: we have plenty of that. It is not educational facilities or teachers' salaries: we could provide for both of these liberally if we were only willing to pay for them. It is not curricular reform: we have the skills and the knowledge to accomplish that, too. The greatest need of all, since all others wait upon it, is a sense of purpose. I do not mean a stated purpose. There is no lack of stated purposes in our catalogues and matriculation ceremonies and baccalaureate addresses. Nor do I mean the *ad hoc* purpose of defending ourselves against possible Russian aggression, vital as that is. I mean a combination of faith and conviction that impels us to take our stated purposes seriously, to have the moral courage to practice what we preach. I mean, too, the intellectual honesty to measure what we do against clearly defined criteria consistent with our stated purposes and not against expediency however disguised as "public relations."

The question is how to induce that sense of purpose. I do not think fear of the Soviet Union will do it. It has awakened us, perhaps, but I do not think we can count on it for much more than that. You cannot frighten people into the sustained intellectual effort, the concentration and self-discipline required by education.

—A. Whitney Griswold, *Saturday Review*, March 14, 1959

TEAM TEACHING—THREAT OR PROMISE?

BY ESMER K. CLARK*

"Team Teaching" is a magic phrase these days. Just when the problems of overwhelming enrollments, scarcity of trained teachers, and lack of financial support seemed unsurmountable, several schools have reported their success with "Team Teaching." Now many schools are studying the plan, hoping to find in it a panacea for all educational ills. Exponents of "Team Teaching" are quick to point out that the plan is not economical. It will not serve thousands of students in plants designed for hundreds; nor will it solve the problem of the teacher shortage. But it may improve the quality of instruction, provide more opportunities for youth, and make teaching a more interesting vocation. Here are a few of its advantages.

Some aspects of instruction are more effective in large groups. Films, lectures, demonstrations, and presentations receive more enthusiastic response when given in a large audience situation. Slow learners, who in the past have covered their embarrassment at being less able by misbehaving, feel that large groups give them anonymity. As they share a learning situation with the "big wheels" of the campus, they are less apt to show off. They learn much from the media of instruction which are not dependent upon gaining information from a printed page. Better students are given more freedom in research, more opportunities for writing, and more supervision of small group discussion. The independent research plan, which is used by many teaching teams, offers better preparation for college than the usual teacher-directed assignment. Students learn to know their libraries. They make use of community resources and seek information from experts outside the school.

Teachers can specialize in areas of their strength. As has been pointed out in the past, even the best teacher is not good in everything, and in today's world no teacher can specialize in an entire field. New teachers are more likely to stay in teaching when they no longer feel lonely and

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frustrated in a classroom where no one shares their problem. They gain much from watching experienced teachers handle students. They have an opportunity to become familiar with the well organized teaching plan. They listen to the analysis of student problems and realize that even the "old timers" find some students difficult to teach. Professional recognition and promotion can be given to many teachers who serve as master teachers in a team without causing them to leave the classroom in order to receive higher salaries.

Team teaching offers much in professional growth. The sharing of research, the careful planning of sequence and organization in a subject, and the careful preparing for formal presentations of lectures does much to train the experienced members of a school staff. Curriculum development follows naturally as needs are recognized. Experiments are tried more freely when they are attempted by a group.

Trained teachers assisted by lay readers, college-educated housewives willing to give a few hours per day in directing reading rooms and study halls, can accomplish much more than they did under the rigid schedule of five periods per day with no variation in class size. Data processing can be used to minimize the keeping of records, and clerks can be employed to prepare many of the supplementary materials which formerly took precious teacher time. Just changing pace from period to period and day to day, makes teaching less onerous. The opportunity to work with an individual child in a personal conference or to lead a small group discussion is conducive to the developing of warm, human relations which offset the dull routine of paper work.

Although "Team Teaching" is certainly no panacea for all educational ills, it seems to offer many advantages in these troublesome times and may indeed be a magic phrase.

PROGRAMS FOR THE CULTURALLY DEPRIVED

Programs for the culturally deprived have been approved in New York. The 1961 session of the New York State Legislature made provision for experimental programs in the schools to identify and encourage the potential abilities of pupils from culturally deprived groups.

—*School Life*, September 1961

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